HEARINGS

BEFORE THE

SUBCOMMITTEE ON INTERNATIONAL ORGANIZATIONS AND MOVEMENTS

OF THE

COMMITTEE ON FOREIGN AFFAIRS

HOUSE OF REPRESENTATIVES

NINETY-SECOND CONGRESS

FIRST SESSION

ON

H.J. Res. 706

INSTRUCTING THE SECRETARY OF STATE TO CALL FOR AN INTERNATIONAL MORATORIUM OF TEN YEARS ON THE KILLING OF ALL SPECIES OF WHALES

H. Con. Res. 375

REQUESTING THE SECRETARY OF STATE TO CALL FOR AN INTERNATIONAL MORATORIUM OF TEN YEARS ON THE KILLING OF ALL SPECIES OF WHALES

JULY 26, 1971

U.S. GOVERNMENT PRINTING OFFICE
66-972 WASHINGTON : 1971

COMMITTEE ON FOREIGN AFFAIRS

THOMAS E. MORGAN, Pennsylvania, *Chairman*

CLEMENT J. ZABLOCKI, Wisconsin
WAYNE L. HAYS, Ohio
L. H. FOUNTAIN, North Carolina
DANTE B. FASCELL, Florida
CHARLES C. DIGGS, JR., Michigan
CORNELIUS E. GALLAGHER, New Jersey
ROBERT N. C. NIX, Pennsylvania
JOHN S. MONAGAN, Connecticut
DONALD M. FRASER, Minnesota
BENJAMIN S. ROSENTHAL, New York
JOHN C. CULVER, Iowa
LEE H. HAMILTON, Indiana
ABRAHAM KAZEN, JR., Texas
LESTER L. WOLFF, New York
JONATHAN B. BINGHAM, New York
GUS YATRON, Pennsylvania
ROY A. TAYLOR, North Carolina
JOHN W. DAVIS, Georgia
MORGAN F. MURPHY, Illinois
RONALD V. DELLUMS, California

WILLIAM S. MAILLIARD, California
PETER H. B. FRELINGHUYSEN, New Jersey
WILLIAM S. BROOMFIELD, Michigan
J. IRVING WHALLEY, Pennsylvania
H. R. GROSS, Iowa
EDWARD J. DERWINSKI, Illinois
F. BRADFORD MORSE, Massachusetts
VERNON W. THOMSON, Wisconsin
JAMES G. FULTON, Pennsylvania
PAUL FINDLEY, Illinois
JOHN BUCHANAN, Alabama
SHERMAN P. LLOYD, Utah
J. HERBERT BURKE, Florida
SEYMOUR HALPERN, New York
GUY VANDER JAGT, Michigan
ROBERT H. STEELE, Connecticut
PIERRE S. DU PONT, Delaware

ROY J. BULLOCK, *Staff Administrator*

SUBCOMMITTEE ON INTERNATIONAL ORGANIZATIONS AND MOVEMENTS

DONALD M. FRASER, Minnesota, *Chairman*

DANTE B. FASCELL, Florida
CORNELIUS E. GALLAGHER, New Jersey
L. H. FOUNTAIN, North Carolina
BENJAMIN S. ROSENTHAL, New York
ABRAHAM KAZEN, JR., Texas
JONATHAN B. BINGHAM, New York
RONALD V. DELLUMS, California

H. R. GROSS, Iowa
PETER H. B. FRELINGHUYSEN, New Jersey
EDWARD J. DERWINSKI, Illinois
PAUL FINDLEY, Illinois
SEYMOUR HALPERN, New York

ROBERT B. BOETTCHER, *Subcommittee Staff Consultant*
JEAN BROWN, *Staff Assistant*

CONTENTS

WITNESSES

MEMORANDUMS SUBMITTED FOR THE RECORD

STATEMENTS SUBMITTED FOR THE RECORD

INTERNATIONAL MORATORIUM OF 10 YEARS ON THE KILLING OF ALL SPECIES OF WHALES

MONDAY, JULY 26, 1971

HOUSE OF REPRESENTATIVES,
COMMITTEE ON FOREIGN AFFAIRS,
SUBCOMMITTEE ON INTERNATIONAL
ORGANIZATIONS AND MOVEMENTS,
Washington, D.C.

The subcommittee met at 2:20 p.m. in room 2255, Rayburn House Office Building, Hon. Donald M. Fraser (chairman) presiding.

Mr. FRASER. The subcommittee will come to order.

Today's hearing was called to consider proposed legislation which would instruct the Secretary of State to call for an international moratorium of 10 years on the killing of all species of whales. The two identical bills which prompted this hearing are House Joint Resolution 706, introduced by Mr. Broomfield; and House Joint Resolution 730, introduced by Mr. Halpern. A similar bill was passed in the Senate by unanimous consent on June 29, the only difference being that the Senate version "requests" rather than "instructs" the Secretary of State to call for the moratorium.

Last week, on July 22, Mr. Bingham introduced House Concurrent Resolution 375, the language of which is identical to the bill passed in the Senate. Unlike House Joint Resolutions 706 and 730 and the Senate bill, Mr. Bingham's concurrent resolution would not require the signature of the President, and would not be binding on the executive branch as law. However, if passed by the House and the Senate, it would stand as an expression of the will of Congress. Today's hearing will also consider Mr. Bingham's concurrent resolution along with the two earlier joint resolutions. At this time, I will place in the record House Joint Resolution 706 and House Concurrent Resolution 375.

(The resolutions referred to follow:)

[H.J. Res. 706, 92d Cong., first sess.]

JOINT RESOLUTION instructing the Secretary of State to call for an international moratorium of ten years on the killing of all species of whales

Whereas the blue whale, the largest creature on earth, has been reduced by the whaling industry to a point of near extinction, and

Whereas, despite the fact that the International Whaling Commission has placed it in a totally protected category, numbers of these and other endangered species of whales continue to be taken in error by whalers, and

Whereas the severely endangered gray whale has increased its numbers successfully after years of protection, and

Whereas whales are mammals with large brains and a complex social life and produce fascinating and complex sounds which have inspired serious musical works, and

Whereas much remains to be learned about these unique creatures through scientific study of their behavior, and

Whereas it is the intent of the Endangered Species Act to prevent conditions that could lead to the extinction of animals, and
Whereas even those species of whales which are not in imminent danger of extinction will become so if present hunting pressures are continued, and
Whereas whales form a resource which may prove of importance to mankind in the future if their numbers are not decimated now, and
Whereas the United States of America has led the world in placing the baleen and sperm whales on the endangered species list so that products made from these and other endangered species may not be imported, and has also moved to end the last whaling by its nationals: Now, therefore, be it
Resolved by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of State is instructed to call for an international moratorium of ten years on the killing of all species of whales.

[H. Con. Res. 375, 92d Cong., first sess.]

CONCURRENT RESOLUTION

Whereas the blue whale, the largest creature on earth, has been reduced by the whaling industry to a point of near extinction, and
Whereas despite the fact that the International Whaling Commission has placed it in a totally protected category, numbers of these and other endangered species of whales continue to be taken in error by whalers, and
Whereas the severely endangered gray whale has increased its numbers successfully after years of protection, and
Whereas whales are mammals with large brains and a complex social life and produce fascinating and complex sounds which have inspired serious musical works, and
Whereas much remains to be learned about these unique creatures through scientific study of their behavior, and
Whereas it is the intent of the Endangered Species Act to prevent conditions that could lead to the extinction of animals, and
Whereas even those species of whale which are not in imminent danger of extinction will become so if present hunting pressures are continued, and
Whereas whales form a resource which may prove of importance to mankind in the future if their numbers are not decimated now, and
Whereas the United States of America has led the world in placing the baleen and sperm whales on the endangered species list so that products made from these and other endangered species may not be imported, and has also moved to end the last whaling by its nationals: Now, therefore, be it
Resolved by the House of Representatives (the Senate concurring), That the Secretary of State is requested to call for an international moratorium of ten years on the killing of all species of whales.

Mr. FRASER. The need for more effective measures to protect the whale is obvious, for humanitarian and ecological reasons. Some of the larger species of whale are already virtually extinct, and the highly mechanized methods of modern whaling have accelerated the steady downward trend in world whale population, particularly during the past 10 years. These unfortunate developments have taken place in spite of efforts by this country and the International Whaling Commission to conserve whale stocks.

Today, the subcommittee hopes to find the best course of action for the U.S. Government to take to protect this unique mammal from extinction. We are fortunate to have with us today a panel of expert witnesses drawn from the executive branch, the International Whaling Commission, universities, and conservation groups. All of our witnesses will be seated together at the witness table in order to make the question-and-answer period more productive by allowing for more than one answer to questions by members of the subcommittee.

Our first witness is our colleague, the Honorable John D. Dingell, Democrat of Michigan. As chairman of the Subcommittee on Fisheries and Wildlife of the Committee on Merchant Marine and Fisheries, Congressman Dingell has been interested in the problem of whale conservation for a number of years. Beyond the problem of whale conservation, however, I think Congressman Dingell has earned a reputation as one of the foremost conservationists in the entire House, and one who very early recognized the need for more attention to problems relating to the environment, ecology, and the need for effective congressional and Federal action. We are delighted to have our colleague with us.

Mr. Dingell, do you want to proceed?

STATEMENT OF HON. JOHN D. DINGELL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN

Mr. DINGELL. Thank you, Mr. Chairman.

I shall be very brief, because I know the committee is busy, and you have some very able scientific witnesses here who can be of great assistance, I am satisfied, in this important problem.

For the record, I am John D. Dingell, Member of Congress from the 16th Congressional District of the State of Michigan. As you indicated, I am chairman of the Subcommittee on Fisheries and Wildlife Conservation of the Committee on Merchant Marine and Fisheries.

I want to express my thanks to you and the committee for your gracious courtesy in permitting me to appear today. There are some points that I would like to make in the context of your hearings on the resolutions now before you. I will say that my comments should be deemed to apply to House Joint Resolution 706 and identical legislation; they may or may not apply to the other legislation to which you have alluded in your opening statement, although I suspect that it probably will.

I do commend my colleague and friend Mr. Broomfield, also our mutual friend and colleague Mr. Halpern, for their interest and for the production of House Joint Resolutions 706 and 730. I believe this is a wide recognition of the serious problem.

I might begin by saying that no one who is conversant with our current efforts to protect the entire order of whales can possibly be happy about that situation, or encouraged as to the future of these creatures. The problems they face are enormous; as you probably already know, scientists today are uncertain as to whether or not we may already have driven the blue whale, the largest animal ever to have existed on the earth, to a point where it cannot recover and reestablish itself—even if, from this moment, we were never to catch another.

I am not, however, sure that the bill before you is the proper vehicle to accomplish the urgently needed job of protecting the whales of this world. More is needed, in my view, than a congressional resolution instructing the Secretary of State to call for a moratorium on the killing of whales. It is unfortunate, as I am sure you will recognize, that the resolution has no teeth in it; citizens of any country, including this one, will be free to continue business uninterrupted

while this resolution and similar actions, work their way through the diplomatic morass of Foggy Bottom and elsewhere.

As I am sure the gentlemen of this committee already realize, there has been a great upswelling of popular support for legislation now pending before my committee, which would have the effect of making it a crime, under varying circumstances, to capture or kill any whale—or, for that matter, other ocean mammals as well. No definite date for hearings on these measures has yet been set, but I can assure you that this is a problem with which we are very much concerned, and to the resolution of which we are dedicated.

I would suggest to you that the bill which our committee will be considering will be a better home for the kind of protection which we both have in mind. I would also say that our committee and our staff is engaged now in a job of carefully drafting the best combination research, moratorium, and humane killing legislation that it is possible to put together, considering the state of the art and the scientific help available to us.

I will say, Mr. Chairman, that adequate protection of whales will and must depend upon sufficient scientific knowledge to assure us that we are not operating in a vacuum of information. This scientific capability can be developed—indeed, a great deal is known already—but it must be done in the total context of the marine mammals of the sea, what they are, and how the populations of these animals are to be sustained. The legislation we will be considering will have provisions for such research.

The problem must be studied in this broader context. I would urge that the gentlemen of this committee support such an effort.

I will say, too, Mr. Chairman, that I have brought with me for assistance to the committee, if you so desire—I don't think he knew he was going to volunteer when he walked into my office today—Prof. G. Carlton Ray, who is an associate professor at Johns Hopkins, graduate of Yale, California, and Columbia. His specialty is marine mammals and marine ecology. He is chairman of the committee dealing with marine mammals of the international biological program, which is supported by the National Science Foundation.

Also, Mr. Frank Potter, who is one of the counsels to my subcommittee, who deals extensively with me and for me on environmental matters.

They will be happy to assist the committee in any questions you might choose to direct to me with regard to the matters we are discussing.

Mr. FRASER. Thank you very much, Mr. Dingell. Are you in a position to stay on, or does your schedule require that we question you now and let you get about your business?

Mr. DINGELL. I think it would be appreciated, Mr. Chairman, I do have other things to do this afternoon which are quite pressing.

Mr. FRASER. Mr. Frelinghuysen?

Mr. FRELINGHUYSEN. Thank you, Mr. Chairman.

I would like to join in welcoming Mr. Dingell to the subcommittee. I thought he was coming to protest the fact that this subcommittee would have jurisdiction over a problem of this kind. I was surprised myself to find out that we had it. I realize we are called a Subcom-

mittee on International Organizations and Movements. I decided this was one of those international movements we could concern ourselves with.

Mr. Fraser tells me it is a question of an international convention that might be a vehicle that would lead to a moratorium, so I guess we do have legislative jurisdiction.

I gather from what you say, though, that you feel that your subcommittee is more likely to come up with a legislative solution or contribution than this one. Is that right?

Mr. DINGELL. Yes. The specific jurisdiction of the subcommittee—of my subcommittee—deals with some of the precise points that we are concerned with today: management of fisheries, and that sort of thing. It was my subcommittee which came forward with the endangered species legislation which was alluded to in the chairman's statement and which has been utilized to halt the taking of whales by Americans under fairly recent action, first by Interior and then subsequently by the Administrator of NOAA and the Secretary of Commerce when that function was transferred to that agency.

I would give you some words of caution. One thing is that certain species of whales are going to need no taking at all. Obviously the blue is one of those. But in the case of some other species it may well be found to be desirable to have modest takings, simply to learn something about the species. This is one of the kinds of problems that our subcommittee proposes to address itself to, to find out precisely what kind of management are needed, what information is needed, what has to be gleaned by harvesting species of whales or certain kinds of species, certain members, certain age groups, and so forth.

Good management of a population of animals involves knowledge not only of the numbers, but the composition of numbers by age groups, sex, the areas where it is to be found, the times of the year; its habits, like the calving, the period that the young stay with the mother, the age at which we could best take the species with the least impact on the species. All these are the kind of questions that we propose to go into.

Mr. FRELINGHUYSEN. The only thing that puzzles me—and, Congressman, your committee has a very legitimate and direct interest—but if we are to get any better control it will have to come about as a result of an international agreement. Of course, you would have no control over what the Soviet Union or Japan might be willing to do, and I would suppose for that reason this subcommittee in its recommendations for modification of a convention might have more thrust than your observations of the sex life of the mammals, or whatever.

Mr. DINGELL. I always get a good laugh when I start talking about sex habits. As you know, they are very important in reproduction.

Mr. FRELINGHUYSEN. I have heard that rumor at least.

Mr. DINGELL. In any event, I would say that the two subcommittees do have jurisdiction in this area of international convention. This subcommittee and the Foreign Affairs Committee have, from time to time, authorized and directed international conventions. My subcommittee has also done this thing. I do not appear here, to make the record clear, to protest jurisdiction. I simply try to give this sub-

committee an understanding of what my subcommittee proposes to do and also to give you the benefit of my limited knowledge in this area so that the end product of the legislative activities of this subcommittee might be most suited to an end that I am satisfied that we both share.

Mr. FRELINGHUYSEN. I have no further questions, Mr. Chairman, except to wish the chairman of his subcommittee well in his efforts. Because I think you have a lot that you can usefully do and I am glad to hear that you are planning to hold early hearings.

Mr. FRASER. Mr. Bingham?

Mr. BINGHAM. Thank you.

I would like to join in welcoming Mr. Dingell. He certainly has been a leader in these matters. I would like to ask this question. Would the legislation that you are considering be directed toward some measures that would affect the other countries, such as Japan and the Soviet Union, and, if so, what sort of message do you have in mind?

Mr. DINGELL. On the last point to which you direct youself I am not able to give you a precise answer beyond saying that one of the things that we propose to do is to see to it that this Government utilizes every possible pressure, direct and otherwise, on the signers of the different treaties and conventions dealing with marine mammals, to assure that the taking of those species of whales which are endangered be cut back to zero at the earliest possible moment.

As you know, one of the problems at this moment is that, despite the fact that there is a convention on the subject of whaling, nations are still continuing to take some of the species which are in serious trouble, partly on the basis of, I think, plain willfulness and partly on the basis of lack of scientific knowledge. As a matter of fact, they say:

If you can show us these species are in trouble, we will be happy to cut back on our taking or to eliminate it.

One of our problems in these areas is that we have never had sufficient information to document how bad off these species are. One of our efforts will be directed to seeing to it that existing international law is implemented as fully as it can be by our executive agencies. and possibly to see what other additional legislative action or encouragement, if you wish the term, of the Executive is necessary to see to it that the appropriate species of whales are protected as they very desperately need to be at this time.

Mr. BINGHAM. Thank you.

Thank you, Mr. Chairman.

Mr. FRASER. Thank you very much, Mr. Dingell. I should say that I think we would want to cooperate with you and your subcommittee in every possible way to the extent that we have complementary roles to play. I think the expertise in your subcommittee and the direct responsibility which you have is a resource that we would want to lean on very heavily. We hope to stay in touch with you and your staff as we move along on this issue.

Mr. DINGELL. I would be anxious and happy to cooperate with you.

Mr. FRASER. I am sure we share the same objectives. So we will want to work as closely with you as we can.

Mr. DINGELL. It has been my experience in dealing with the State Department and with NOAA in matters of this kind that they tend to be rather sleepy agencies and they tend to need a great deal of

congressional pressure to keep them going in the proper direction. As a matter of fact, just to keep them going at all requires pressure. I would urge you to be vigorous with them.

Your experience with the State Department has been more extensive than mine, but I would remind you in your dealings with the State Department that they can say a great deal about doing very little, and they can make it sound very good. I would suggest one of the questions you might vigorously pursue is precisely what they are doing.

As you get closer to the bone, if there be any, in their statement you will probably find that there is very little. At least this has been my experience with the State Department on matters of this kind.

Mr. FRASER. Thank you very much. We will give the State Department a chance for rebuttal. We do appreciate your testimony. We will plan to work very closely with you.

Mr. DINGELL. Thank you. If you do have any questions of Dr. Ray or Mr. Potter at this time, I am sure they will be happy to answer them.

Mr. FRASER. I will include in the record at this point a statement submitted by Congressman Broomfield in support of his measure, House Joint Resolution 706.

(The statement referred to follows:)

STATEMENT OF HON. WILLIAM S. BROOMFIELD, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF MICHIGAN

Mr. Chairman, I commend you for scheduling these hearings to examine this most important resolution. As I remarked in my statement introducing the bill, "the whale has no lobby in Congress or around the world. It is up to us to see that he is protected from the remorseless havoc man has brought upon his existence."

There is but one basic argument, Mr. Chairman, against my resolution instructing the Secretary of State to call for an international moratorium of ten years on the killing of all whales, and it is that argument I will address in my testimony before your subcommittee today.

It has been held that passage of this resolution would be little more than an idle gesture—one which would have, moreover, a detrimental effect on delicate negotiations now going on between the United States and other members of the International Whaling Commission. Such a unilateral move on the part of the United States, it is claimed, would destroy our credibility as a serious participant in these talks.

It should be noted first, Mr. Chairman, that this was the exact argument used against former Secretary Hickel's decision to place certain types of whale on the Endangered Species List; at that time, his opponents claimed that these matters should be left to the IWC to decide and not just one member nation acting unilaterally.

The argument, of course, has since been discredited. We know now that Hickel's action, rather than reducing prospects for realistic whaling regulations, was, on the contrary, a major factor in the IWC's recent decision to lower quotas below their present levels and to institute some form of enforcement procedure.

Since 1955, for example, the IWC has been toying with an International Observer Scheme that would place an impartial representative of the body on each whaling ship to see that established regulations are adhered to. Without such a scheme, of course, none of the Commission's regulations were observed, except perhaps in the breach. Without such a scheme the Commission had no basis for enforcement of its rules and whalers no incentive for adherence to them. The idea was essential to the proper control of the industry.

For sixteen years the plan was considered, dropped, considered again and finally let die. An observer of the Commission could only draw one conclusion: that the member nations of the IWC really did not want to bother regulating themselves, that they preferred regulation in principle to regulation in fact, and that they would squelch immediately any suggestion that they might have to lower their enormous profits.

Only until this year's meeting, *after* Secretary Hickel's decision, did the Commission actually adopt an International Observer Scheme. Of course, we have no assurance that it will ever be put into effect, but surely its very adoption is proof that the Secretary's action was, indeed, no idle gesture.

That is why I cannot accept the State Department's assertion that the passage of this resolution will upset its delicate negotiations with the IWC. For sixteen years all their delicate negotiations could not convince the IWC to adopt the much-touted International Observer Scheme; only a unilateral action on the part of the United States could do that. If there are any idle gestures involved here, Mr. Chairman, they are precisely these so-called "delicate negotiations" and not the resolution before your subcommittee today.

I am sure you are well aware how critical the whale's situation is. Even under the IWC's supposed protection several major species are rapidly approaching extinction.

The time for delicate negotiations is over. The Secretary of State must take the whale's case beyond the IWC, if that is necessary, to the capitals of those nations so deeply involved in the slaughter and, if they will not listen, to the United Nations itself. Let us act now before humanity has time to obliterate one more of nature's children.

Mr. FRASER. We are delighted to have Professor Ray and Mr. Potter with us. Will they be able to stay?

Mr. DINGELL. They both indicated they would do so.

Mr. FRASER. Fine. Perhaps along the way we can call on you or, if you want to make a point, you might indicate during the question-and-answer period.

Mr. DINGELL. I will indicate that Dr. Ray has been doing a great deal of work in this precise area of whale management. He has attended a great number of international meetings that have been held. I commend him entirely as an expert who can be of great help to you.

Mr. Potter I commend very highly. He is a very able member of my staff and an environmentalist, too.

Mr. FRASER. Thank you very much.

Mr. DINGELL. Thank you.

Mr. FRASER. The next witness is Mr. Stuart Blow, the Acting Coordinator of Ocean Affairs, Department of State.

STATEMENT OF STUART BLOW, ACTING COORDINATOR OF OCEAN AFFAIRS, DEPARTMENT OF STATE

Mr. BLOW. My name is Stuart Blow, and I am Acting Coordinator of Ocean Affairs.

Mr. Chairman and members of the subcommittee, I am grateful for this opportunity to appear before the subcommittee and to offer comments on House Joint Resolution 706, which would instruct the Secretary of State to call for an international moratorium of 10 years on the killing of all species of whales.

Let me make clear at the outset that the Department of State is in sympathy with the motives which inspired the introduction of this resolution. All of us are concerned about the condition of the world whale populations. There is no doubt about the need for complete protection of certain species. The Department is anxious to see that effective action is taken to establish and enforce proper conservation measures for whales, including provision for the rebuilding of the stocks where needed.

The International Whaling Commission, the organization established to deal with these problems, has not performed as effectively as the United States would have liked. Nevertheless, substantial advances

have been made by the Commission over the past few years, and we feel it is desirable to continue to seek to strengthen that organization and to hasten the progress of its efforts to carry out its mandate fully. This course is to us preferable to the action proposed by House Joint Resolution 706.

The United States is, of course, a member of the Commission, which was established by the International Whaling Convention of 1946. The Commission has been, to say the least, an imperfect mechanism for the conservation of the whale stocks. The reasons for this are various, but stem in large degree from the nature of the convention itself. The treaty was negotiated at a time when there was great concern over the supply of edible oils and of food in general; and providing for the orderly development of the whaling industry, as well as for the conservation of the whale stocks, was a matter of considerable importance. In any event, there are built into the treaty certain factors which have made it difficult for the Commission to operate effectively as a conservation agency.

For the first decade or so of its life, the Commission was almost completely paralyzed by the inability of its members to agree as to the condition of the whale populations in the Antarctic. Beginning with the decade of the 1960's, however—and with a leading role played by the United States—the Commission began to take on new life. It has moved haltingly and certainly not fast enough or far enough to meet effectively the problems of the conservation of whales. There is no question, however, but that substantial progress has been made over these years. During that period, in addition to the original prohibition on the killing of gray whales and right (and bowhead) whales, prohibitions have been added against the killing of blue whales and humpback whales. Thus, a moratorium on the killing of five species of whales is already in effect.

The Commission is now dealing primarily with the stocks of three species: Finback whales, sei whales, and sperm whales, plus an additional smaller species which is becoming of increased interest; that is, minke whales. While there is reason for concern about continuing overexploitation of some of these stocks, others are reasonably well under control, or at least do not appear to be in any danger at this time.

At the recent annual meeting of the Commission held June 21–25 in Washington, the U.S. delegation frankly did not achieve its objectives. The measures which were adopted did not in the view of the United States go far enough. On the other hand, the measures that were taken did constitute an advance toward the objective of bringing the catches to levels consonant with the best scientific estimates. Moreover, commitments were given that further measures would be taken at the next annual meeting, which would bring us closer to our goals.

Incidentally, in developing its position for the recent meeting, our delegation considered the suggestion that there be a total moratorium on whaling for 10 years, during which time scientific studies could be made which might lead to more accurate guidelines related to insuring the recovery of various whale stocks. However, the delegation came to the conclusion that such drastic action was not necessary at this time, and that continuation of whaling operations under proper controls was not incompatible with conservation objectives.

On the whole, we feel we are making progress in the International Whaling Commission, and we expect that the Commission will be increasingly able to fulfill its responsiblities. Should events indicate that our confidence in this respect is unjustified, we would of course wish to keep open our options as to other courses of action. In any event, we believe we should work within and make full use of established international mechanisms.

The whaling countries are already well aware of the depth of feeling in the United States about the future of whales and whaling. They have been shown this by the action of this Government in placing eight species of whales on the endangered species list, and by the announcement that no more licenses will be issued to U.S. nationals to kill whales after the end of this year. Under Secretary Johnson made the situation perfectly clear in his remarks to the Whaling Commission at its recent meeting.

The action proposed by House Joint Resolution 706 appears to be incompatible with the continuing vigorous role of leadership which we believe the United States should play in the Whaling Commission, since that action will be interpreted as a rejection of the Commission and its present and potential role as a conservation body. Consequently, while we understand and are sympathetic to the fundamental motives underlying the legislation, we consider it to be unnecessary and therefore do not favor its adoption.

Thank you, Mr. Chairman. If there are any questions, I shall be glad to respond to them.

Mr. FRASER. Thank you, Mr. Blow. If it is agreeable with the subcommittee, we will continue with the other witnesses and then come back and ask questions of the group as a panel.

Our next witness is Mr. Scott McVay, of Princeton University, chairman of the Committee on Whales, Environmental Defense Fund.

STATEMENT OF SCOTT McVAY, PRINCETON UNIVERSITY; CHAIRMAN, COMMITTEE ON WHALES, ENVIRONMENTAL DEFENSE FUND

Mr. MCVAY. Thank you, Mr. Chairman, for the invitation to testify before the House Subcommittee on International Organizations and Movements in regard to House Joint Resolution 706 introduced by Congressman William S. Broomfield calling for a 10-year moratorium on whaling which has passed unanimously in the Senate on June 29, 1971.

My name is Scott McVay. I have been concerned about the problem of whale conservation for 10 years and am currently chairman of the Committee on Whales of the Environmental Defense Fund. In this capacity, I furnished information on whales to the Department of Interior's Office of Endangered Species; attended the 1970 meeting of the International Whaling Commission (IWC) in London as an observer; testified at a consultation called by the Department of Interior on July 9, 1970, on the status of the sperm whale; traveled to Japan in August 1970 to encourage leading scientists there to form a "committee for the protection of whales"; presented a paper to the International Conference on Whale Biology last month; and served as a member of the U.S. delegation to the 1971 IWC meeting in Washington.

For Scientific American (August 1966) I wrote one of the first accounts of the whale tragedy 5 years ago, and authored three further articles that appeared earlier this year in Natural History (January 1971), National Parks (February 1971), and the Bulletin of Atomic Scientists (February 1971).

We now know that we can no longer plead innocence: we now know what we have done and what we continue to do. The whale has become a symbol of our indifference to vanishing wildlife, especially the larger forms, and our neglect of the natural environment. Unless something is done, the whale may by default slip from comparative obscurity to oblivion.

For centuries the whale has exerted a fascination on man. It has illuminated writings and works of art from prehistoric times down to the present. One of America's noblest works is Herman Melville's Moby Dick, yet here as elsewhere nature surpasses the work of man.

Now that the commercial whaling industry is on the verge of collapse, now that five species of great whales have been driven to ecological and commercial insignificance—the bowhead, the right, the gray, the blue and the humpback—we seek to assure the survival of whales in the world's oceans. Let us hope it is not too late. The goal is difficult; the whaling business continues to jerk along like a lethal mechanical toy, set in motion a century ago, that won't stop until it winds down completely. Congressmen Broomfield and Halpern have proposed a 10-year moratorium on whaling. This will give the whales a brief respite from the ruthless pattern of predation that has stalked them in every decade of this century. Then international controls might be set up to provide long-term protection.

Whales have been a matter of growing interest and concern to thousands of Americans in the past year. Three examples:

(1) More than 50,000 records, Songs of the Humpback Whale, have been sold during the past year:

(2) According to the New York Times in January, 350,000 Americans now go out in small craft to glimpse the gray whale as it moves past southern California in its annual migration to Baja, Calif., and

(3) President Nixon continues to receive hundreds of letters on the whale problem every week.

Even in this morning's paper James Reston described the consultation prior to his operation in Peking, when the antiimperialist hospital's revolutionary committee was looking him over, by saying, "I felt like a beached white whale at a medical convention . . ."

In the past year the United States has taken strong specific steps to disengage itself from all aspects of commercial whaling except its regulation. The actions by the Nixon administration through the Departments of Interior and Commerce have been commendable.

To "prevent conditions that lead to extinction" the Department of Interior, following an intensive 6-month review of the problem, last November placed all of the great whales on the endangered species list including the commerically hunted finback, sei, and sperm whales. This action prohibited the importation of whale products into the United States which has comprised 20 percent of the world market. Similar action by the European Common Market, which imports at least as large a volume of whale products as the United States, is urgently needed.

The followup action by the Department of Commerce this past April closes down the last remaining whaling station in this country by the end of 1971. Last year this California company took only 5 fin whales and 4 sei whales—just 10 percent of quota. How has the whaling station been able to last this long? Only by taking "protected" whales, gray whales and undersized sperm whales, under special scientific permit.

Despite a strong U.S. position at the 23d meeting of the International Whaling Commission held in Washington last month, the Commission conducted its affairs in a "business as usual" fashion. How can this be? Is it more concerned about the shortterm interests of industry rather than the protection of the dwindling whale populations? The Commission continues to focus on a comparison of last year's catch with that of the year before; little note is taken of the tragic decline in the population of stocks and species of whales since mechanized "fishery" has pursued whales almost unchecked by international regulation.

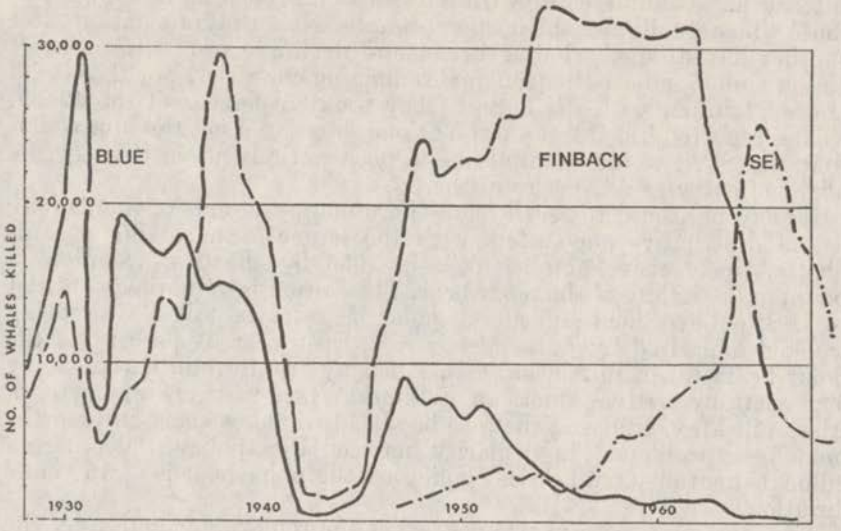
A biologist, familiar with the workings of the Commission over many years, has questioned whether the whales are not worse off for the existence of the IWC. He contends that if the industry had been wholly unrestrained it would have collapsed a few years ago for Japan and the Soviet Union as it has for England, Netherlands, and Norway, the high-labor-cost countries. Now we are all witnesses to the slow death of whaling and the more systematic demise of whale stocks and species. One may yet hope that the IWC still contains man's potential for rational management. The 1972 meeting in London can be a landmark since the concern that has developed in this country in the past year may be expected to reach other places by then.

Only in the sweep of history can the question of a moratorium be properly considered. We have only to recall the unrestrained exploitation of whales that began in the Bay of Biscay fishery in the 12th century which plundered the right whale in those parts, the ravaging of the eastern Arctic in the 17th century by nine European powers leaving scarcely a spout of the bowhead, and the wanton destruction of the blue and humpback populations in our century. Even while recognizing an improved effort by some member nations of the International Whaling Commission, the faltering steps of the Commission as a whole in the last few years cannot overcome the havoc wrought by the whalers in our time. As a consequence, the resolution recommending a 10-year moratorium on whaling seems not only reasonable but minimal.

For example, 10 years would not be long enough for a recovery of the fin whale population in the Antarctic which, with the blue initially and the sei more recently, has borne the brunt of intense commercial whaling over the past quarter century.

If you have the chart before you, gentlemen, you can see the maximum catch for the blue whale was in 1931 and then it went steadily downhill with the exception of the dip during World War II. In the case of the finback, the maximum catch was between the middle 1950's and the early 1960's when more than 30,000 fin whales were taken worldwide every year. If half as many had been taken, say 15,000, that number could have been taken on a sustained basis indefinitely. But the "principal" of the stock was taken as well as its "interest," if you will.

(The chart referred to follows:)



WORLD CATCH OF BALAENOPTERA WHALES

Let me make a slight digression: Even with a moratorium, the finback would take 20 years to recover to one-half of its unexploited state. At the recent IWC meeting, the median estimate of Dr. Douglas Chapman and Radway Allen, members of the Scientific Committee, of the sustainable yield of finbacks in the Antarctic was 2,200. A quota of 1,700 finbacks was proposed by the United States to allow the population to recover to "maximum productivity" at that rate of exploitation in 200 years. But this moderate recommendation was ignored by the Commission. The whalers were authorized again next season to take substantially more than the population can produce, possibly as many as 3,000—further depleting a population that has been reduced to 20 percent of its former numbers.

And, again, the irrational blue whale unit will be used as a system of accounting. Why do I say "irrational?" How does the blue whale unit work? One blue whale unit is equal to one blue whale or two finbacks or two-and-one-half humpbacks (do you cut them horizontally or vertically?) or six sei whales. Initially and for many years the Antarctic quota was set at 16,000 blue whale units. First, by talking in "units" rather than "whales," you make it arithmetic not biology. And bad arithmetic. Furthermore, such arithmetic removes the killing of whales from our concern for the viability of each species. The blue and humpback whale stocks in the Antarctic have been so ravaged that their very survival is questioned. To sum up, the blue whale unit has repudiated rational management since what is not taken of one species can be taken from another irrespective of what the latter can sustain. As if this were not enough, the blue whale unit quota has been consistently set far above scientific recommendations thereby further reducing the remaining whale stocks.

Timely action by the House of Representatives on this resolution will unify the public posture of the United States. It will be the proper

sequel to the encouraging steps taken to date. For until the actions by Interior and Commerce, the United States has been an accomplice to those who actually fire the harpoon-bombs. Now that one nation after another has stopped whaling because of declining profits, the Soviet Union and Japan are the principal remaining countries. For those who are not familiar with the figures, they took 85 percent of the 42,266 whales reported killed last year. Yet one should not get the impression that the Soviets, for example, have been entirely insensitive to the plight of endangered species in the past.

It may be useful to recall from the unhappy annals of man's long list of destructive encounters with the larger forms of life on this planet, the decisive action taken in 1956 by the Soviet Union in banning the killing of the polar bear. This action is in marked contrast to U.S. policy which still allows polar bears to be killed after being tracked and tired by pursuing aircraft. Last year 91 percent of the polar bears taken in Alaska were killed by trophy hunters and only 9 percent by native American Eskimo. When we were in northern Alaska in May, studying the rare bowhead whale, we encountered the polar bear problem. The disparity between U.S. policy, reflecting an affluent mentality, and Soviet policy on the polar bear is of 15 years' duration.

Also worthy of note in this context is the remarkable action by the Soviet Union in April 1966, to ban the killing of dolphins and porpoises—these are smaller members of the whale family—because of the size and complexity of their brains. In making the announcement the Soviet Minister of Fisheries Ishkov called the dolphin "the marine brother of man"—a rather remarkable pronouncement from a Minister in any country. These examples from what has been considered one of the "villains of the piece" cast a few shafts of light on an otherwise dark picture. The Japanese record on endangered species is no better than our own.

Furthermore, the Soviet's willingness to negotiate an international observer plan after the recent IWC meeting, which will be operative in the Antarctic next season, suggests that it may be possible to secure international accord on so bold a conservation measure as a moratorium. Quite frankly, the Soviets do have a problem. In 1963 West Germany completed two enormous factory ships for the U.S.S.R. at a cost of $32 million. Will the Soviets be willing to write off that investment now? The Japanese have a similar problem although past profits have paid for their investment many times over.

The proposed 10-year moratorium on whaling seems to be a moderate interim step toward the building of world opinion in support of effective protection of whales. Other strategies have been advanced: (1) organize a ban by the European Common Market on the importation of Japanese and Soviet whale products by effective endangered species legislation, particularly in England and West Germany, or by other means; (2) how many millions is the U.S. Government paying to the opium growers in Turkey? What would it cost to buy up the remaining whaling ships before the remnant whale populations are further reduced?

The 10-year period would provide an excellent opportunity for the study and observation of live whales in contrast to much work in the

past on dead whales by scientists who have been dependent on the industry. Census and behavioral studies of several species of great and lesser whales could be carried out under a broadly conceived international program along the lines suggested at the recent International Conference on the Biology of the Whales. A cooperative international effort on the whale problem, which is free of ideological obstacles, may serve as a precedent for transnational cooperation on other environmental problems.

We know of no current use of whale products for which an adequate substitute does not exist, and we are beginning to recognize that whales may have a larger claim on our attention than when transformed to lubricants and lipstick. More than 100 years ago, Henry David Thoreau asked:

> Can he who has discovered only some of the values of whalebone and whale oil be said to have discovered the true use of the whale? Can he who slays the elephant for his ivory be said to have "seen the elephant"? These are petty and accidental uses just as if a stronger race were to kill us in order to make buttons and flageolets of our bones . . . .

Let us hope that today we are approaching the place where we can begin to divine "the true use of the whale".

Having a decent respect for the future opinion of mankind and for ourselves as well, we may hope that actions taken today will allow many of the species of great whales to survive and replenish themselves in the oceans of the world, and that each species' wonderful peculiarities will become better known to man. More eloquent than any appeal I can make, more powerful than any revelation of facts and figures, is the newly discovered whale song.

Mr. FRASER. We are about to hear the whale song.

(Recording of the Song of the Humpback Whale by Frank Wathington.)

Mr. MCVAY. For any members of the committee who are interested in hearing a trio of three whales in stereo over headphones afterward, recorded by Roger Payne, I would be pleased to provide it.

Mr. FRASER. Was that just one whale?

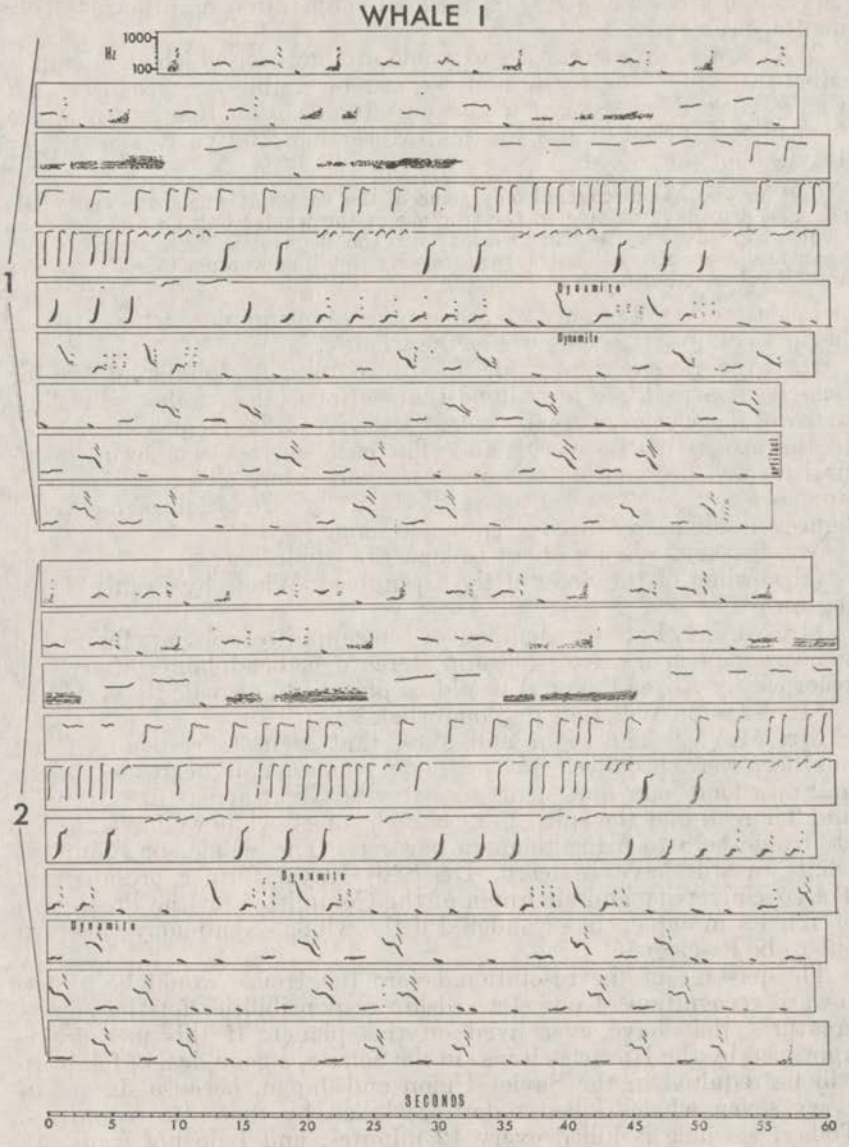
Mr. MCVAY. The highs and lows, that seem to respond to one another, were produced by just one whale. You heard less than half of a long song that spans six octaves. Great artists like Melville and Thoreau had the spirit to hear such songs, while we have needed electronic help to bring them to our ears. The whale song hints at what we still have to learn. Dr. Seiji Kaya, former president of Tokyo University and chairman of the Committee for the Protection of Whales in Japan, has wondered if the whale's symphony will turn out to be its elegy.

The passage of the resolution before the House would be a step toward recognition of our stewardship responsibilities for the largest creatures that have ever lived on this planet. If this measure is approved by the House as it was in the Senate, a good deal of followup will be required in the Soviet Union and Japan, because six out of every seven whales killed today are killed by those two countries. Today, a whale is killed every 12 minutes, and I do not want my initial remarks to run longer than the interval between kills.

Thank you.

Mr. FRASER. Thank you so much. That was a very interesting statement.

Our next witness is Dr. Douglas Chapman, dean of the College of Fisheries, University of Washington, Seattle; and chairman of the Scientific Committee of the International Whaling Commission.



The above is a tracing of fundamental frequencies from a logarithmic analysis by spectrograph of two songs produced by one humpback whale. Because of time constraints only four minutes were played [lines 3, 4, 5, and 6]. A detailed account of the "Songs of the Humpback Whale" by Roger S. Payne and Scott McVay will appear in the August 13, 1971 issue of Science.

STATEMENT OF DR. DOUGLAS G. CHAPMAN, DEAN, COLLEGE OF FISHERIES, UNIVERSITY OF WASHINGTON, SEATTLE, CHAIRMAN OF SCIENTIFIC COMMITTEE, INTERNATIONAL WHALING COMMISSION

Mr. CHAPMAN. Thank you, Mr. Chairman and members of the subcommittee.

I am certainly very pleased to have this opportunity to appear before your subcommittee on House Joint Resolution 706. For the record, my name is Douglas G. Chapman. I am chairman of the Scientific Committee of the International Whaling Commission, which was involved originally in the study referred to in my written document here, and I have been chairman of the Commission's Scientific Committee for the past 6 years. Much of what I have written here repeats a great deal of what Mr. Blow has said.

At the end of World War II, the United States convened a conference with the aim of establishing better regulation of the whaling industry throughout the world, and particularly in the Antarctic. This conference led to the establishment of the International Whaling Commission in 1948. During its early years, the Commission took a number of restrictive acts, but, unfortunately, in general, the restrictions were too little and too late and were often rendered ineffective by individual vetoes. These failures of the Commission, which have been so strenuously referred to by Mr. McVay, have led to the near extinction of the blue whale in the Antarctic and excessive overexploitation of fin whales. However, in 1960, again at the urging of the United States, the Commission set up a study group which in 1963 recommended drastic reduction in quotas. After some further delay, the Commission finally faced up to its responsibilities, and in 1965 agreed to reduce quotas over the next 2-year period to the level of the sustainable yield, which would mean no further reduction in the stocks that had been overexploited. At this same time, it put a total ban on the killing of the decimated species, blue and humpback whales. Delays in implementation have subsequently necessitated further reductions, and these the Commission has made. At the same time, in the past years, and particularly in the past meeting, it has taken forthright action to reduce quotas in the North Pacific to levels indicated by the best scientific evidence.

Despite these actions and despite the membership of the United States in the International Whaling Commission, in 1970 our Government elected to take unilateral action which, in effect, suggested that the Commission was not doing its duties properly or adequately. Action was taken by the Secretary of the Interior in placing several species of baleen whales and sperm whales on the endangered species list. I protested this action in lectures to Secretary Hickel and to Mr. Gottschalk, dated July 22 and August 24 respectively. I regard the proposed moratorium as being action of a similar nature. Both sperm and sei whale stocks appear to be at or near optimum levels as far as human utilization is concerned; to place a moratorium on the killing of these species can hardly be said to be a rational act. The fin whale stock is at a level much below that which would give maximum sustainable yield, but it would seem that the quotas required to bring this stock up to the maximum level should be determined with all

consideration taken into account by a specialist agency such as the International Whaling Commission rather than by a blanket prohibition. I was one member of the U.S. delegation to the annual Commission meeting that was held in Washington last month, and I believe that our delegation took a very reasonable view on the occasion of that meeting. We pressed very hard for sharp reductions in catches of fin whales so that this stock could be rebuilt, and, where necessary, for reduction of the catches of sperm and sei whales to levels that would support continuing rational exploitation.

In addition, the delegation pressed for approval of the international observer scheme that would insure strict enforcement of the regulations promulgated by the Commission. Any action that our Government could take to encourage all members of the Commission and nonmember countries to strictly adhere to and enforce the Commission's regulations would be most valuable. There may indeed be problems in the conservation and optimum utilization of the whale resources of the world, but these problems are not appropriately treated by a moratorium applying to all species and all oceans.

Thank you, Mr. Chairman.

Mr. FRASER. Thank you very much, Dr. Chapman.

Our next witness is Dr. George Small, professor of geography, City University of New York and author of "The Blue Whale."

Dr. Small.

STATEMENT OF GEORGE L. SMALL, PROFESSOR OF GEOGRAPHY, CITY UNIVERSITY OF NEW YORK, AUTHOR OF "THE BLUE WHALE"

Mr. SMALL. Mr. Chairman, I would like to thank you very kindly for the invitation to address this body. I feel that proposed House Joint Resolution 706 is an action which is 10 years overdue.

In 1936 the Government of the United States placed a ban on the killing of the California gray whale. That great cetacean had been hunted to the point of biological extinction. As a consequence of the governmental protection the California gray whale was able to survive and indeed to increase its population to a now estimated 10,000. At the present time nearly every species of commercially hunted whale is in need of similar protection. If worldwide protection is not now granted, disaster will strike the whales as well as the human race itself.

The disaster I refer to will take three forms:

First, human hunger. The whales of the world are a renewable resource; that is, they can be harvested forever to the extent of their sustainable yield by species provided they are not exterminated. Every species of whale now being hunted has human food value, including the sperm whale, and if they are not soon given complete protection for at least a decade, we will in essence be killing a goose that lays precious golden eggs. The food potential of a properly managed stock of whales is indeed remarkable. For example, the blue whale now on the verge of biological extinction had an optimum population level of about 60,000. (Early in this century its population was between 150,000 and 200,000.) That level could have provided mankind each year in perpetuity an annual supply of 6,000 blue whales. Those whales could have provided 2.5 ounces of margarine or edible oil a

day every day for a year for 4,138,000 adult human beings. In addition they could have supplied a 6-ounce steak every day for a year for 3,090,000 adult human beings.

The International Whaling Commission failed to protect the blue whale, and it failed to protect the humpback. It has not protected the fin whale which will soon face commercial extinction. Note that I say "commercial extinction." The fin whale, however, for reasons unknown to man, has a higher optimum population level and it could supply the human race with twice as much food as the blue whale. In total, the whales of the world, if given protection now, could supply the necessary fats and proteins to sustain the lives of more than 10 million human beings. If used to supplement inadequate diets, they could guarantee an adequate diet for many more millions. What justification could there possibly be for not protecting these whales? If the Government of this Republic is truly concerned with the well-being of mankind it will raise its voice to protect this perpetual source of food at a time when the human population is increasing more rapidly than the supply of food.

Second, ecological disruption of the high seas. Many species of large whales have been so reduced in numbers by mankind that they face biological extinction. There are only three left of any commercial value, the fin, the sei, and the sperm whale. If these are not given time to reconstitute their number an already serious ecological imbalance may be rendered catastrophic. There is one species of large whale that has no commercial value for man and that is the killer whale whose population remains undiminished. The killer whale is perhaps misnamed, but it is a carnivorous species with a good appetite. When there are no more baby whales of large species for it to feed on, where will it find food? One of its favorite foods is seals. How long could the seals of the world sustain the killer whale population? When it eliminated the seals, what would it use for food? The beaches of the world have enough problems already.

I admit that is a bit of exaggeration, but I am pointing out here that we must save these whales because we are not sure precisely of the ecological disasters which might come about. It is a subject which in terms of the whale's role in the ecology of the oceans has not been studied.

Third, medical ignorance. Research and experimentation on human medical problems depend to a large degree on the availability and analogous structure of other animals. This is particularly true of mammals that have supplied us not only with knowledge about our own physiology but also with specific medicines. Whales are particularly close relatives of man, but they have been neglected as a source of medical knowledge. We slaughter them for pet food and profit, but we do not study them. For example, the blue whale was killed by the hundreds of thousands and pushed to the horrible brink of biological extinction, but not one was known to have had a malignant tumor. Why? Was there some endocrinal substance in its circulatory system that prevented that tragic mammalian disease? We will never know. What justification is there for not giving protection to the whales of the world so that they may survive and be of service to man?

An opponent of House Joint Resolution 706 might argue that a ban on the killing of all whales for 10 years is not necessary. He might suggest that the International Whaling Commission, in existence for only 22 years, be given time to carry out its mandate to regulate the whaling industry of the world. An American opponent of this bill might add that only recently has the United States taken the lead in that organization by acquiring positions of leadership such as chairmen of committees and the Commission itself. Such suggestions are based on facts, but they are facts which hide incredible failures and cannot bring success.

The International Whaling Commission first convened in 1949. Its task, according to the International Convention for the Regulation of Whaling that established it, was to manage the stocks of whales of the world in such a manner as to preserve the stocks of undepleted species and permit the increase in numbers of depleted species. What happened? No depleted species ever was able to increase in numbers. The blue whale was slaughtered to the verge of extinction. The humpback whale was slaughtered to the verge of extinction. The stocks of fin whales, sei whales, and sperm whales have been decimated and are almost commercially extinct.

There may be some doubt as to how close to commercial extinction they are, but we are on a dangerous track if we continue. In sum, the International Whaling Commission is a complete and utter failure. It achieved nothing.

In the future no success can be expected from the International Whaling Commission because there have been no changes in its procedures, its organization, its membership or its powers. For example, its annual meetings are still closed to the public and the press. Each member nation retains a veto or a right to reject any conservation measures even if passed by 99 percent majority. Several whaling nations are not members and carry on the industry in disregard of even the weakest control measures. The Whaling Commission cannot enforce its own regulations or even collect unpaid dues of recalcitrant members. I believe the dues are now only about 350 pounds a year.

Nearly all the pelagic (high seas) whaling in the world today is carried on by Japan and the Soviet Union. Two illustrations concerning the practices of those nations will point out the impotence of the Whaling Commission, even with an American as chairman of every committee and the Commission itself.

According to its charter every member of the International Whaling Commission is represented by one Commissioner. The American Commissioner, like those of most nations, was appointed by the governmental agency responsible for foreign affairs. For years, the Japanese Commissioner was appointed not by the Japanese Government but by the Japanese whaling companies. And since each commissioner had veto power, the Japanese companies decided their own policies. On numerous occasions the longtime American Commissioner, Dr. Remington Kellogg, complained in his report to the Secretary of State that the Japanese Government could not control the corporate giants, the whaling companies, that blocked effective conservation measures. Furthermore, there is virtually no evidence that the Japanese Government cares to protect the resources of the high seas. For example, in June 1967 Japan and other whaling nations agreed to ban the killing

of blue whales everywhere south of the Equator. In October of that year Japan granted licenses to Japanese companies to engage in whaling from bases in Chile, but with no stipulations against killing blue whales. In addition the Japanese Government urged the companies to form subsidiaries with Chilean interest.

This allowed Japanese whalers to operate under the flag of Chile which is not a member of the International Whaling Commission. Thus the Japanese continued to kill blue whales and made a mockery of their agreement to spare the species.

Since 1955 Norway has been trying to establish a system of international inspectors on the whaling ships of the world. Those efforts were carried on in the Whaling Commission with the support of the United States. Those efforts failed because of the objections of the Soviet Union. Whatever the reason, and despite the childish excuses given in objection to international inspectors, the fact remains that the Russians are free from prying eyes to kill protected species and commit other infractions. There is much evidence that points to illegal Russian whaling. For example, in 1961 and 1962 humpback whales virtually disappeared from New Zealand, eastern Australia and the region of the Antarctic to the South. Five thousand humpback whales didn't vanish, they didn't die of epidemic diseases and they didn't go elsewhere. They were shot. There is a high correlation between the number of whales a company kills and its oil production, and the production from 5,000 unreported humpback whales would have been discovered. It would have been discovered if the whalers records could be examined and the records can be examined for all whalers except Russians. The facts of this case are taken from International Whaling Commission documents.

In conclusion, the International Whaling Commission has failed. It cannot succeed under its present structure. Only action at a higher level can save the remaining whales of the world. The Government of the United States should take the lead and induce the whaling nations of the world to accept a 10-year moratorium on all whaling. Such action will not cost the American taxpayers 5 cents. It will preserve a multimillion dollar source of precious food that mankind cannot afford to destroy. It will help to maintain the balance of nature in the world's oceans. And it will show the people of the world that this Republic can and will act not for itself, but for all mankind.

Mr. Chairman, to point out one of the great shortcomings of the International Whaling Commission, I would like to add that I cannot as a citizen attend the meetings, and I did not find out until 2 days ago, long after this report was written up in the early part of the week, that the Japanese Commissioner to which I referred, who is appointed by the Japanese fishery whaling companies, has just completed a 3-year term as chairman of the International Whaling Commission. As an American citizen, that shocked me.

Thank you, sir.

Mr. FRASER. Thank you very much, Dr. Small.

We have now heard from Mr. Blow for the State Department, and Mr. McVay, Dr. Chapman, and Dr. Small. We have some statements

66-972—71——4

that I would like to insert in the record at this point, by Mr. E. U. Curtis Bohlen, Assistant to the Secretary of the Interior; Lewis Regenstein, Washington coordinator, Committee for Humane Legislation; Tom Garrett, the wildlife consultant for Friends of the Earth; Mrs. Christine Stevens, secretary, Society for Animal Protective Legislation.

(The statements referred to follow:)

STATEMENT BY E. U. CURTIS BOHLEN, ASSISTANT TO THE SECRETARY OF THE INTERIOR

Mr. Chairman and members of the subcommittee, I appreciate this opportunity to comment on House Joint Resolution 706, which would instruct the Secretary of State to call for an international moratorium of ten years on the killing of all species of whales.

The Department of the Interior is concerned at the failure of the international whaling industry to institute a rational system of management of all whale stocks. The herds of the great whales, which are the common heritage of all mankind, could at optimum stock levels, contribute significantly to human needs for protein. We therefore seek a policy for whale management which will ensure that no stock is reduced below its optimum level or, when this has already happened, that exploitation is restricted to permit the stock to recover to its optimum.

Regrettably, the history of the past century is one of successive overexploitation of many of the major whale species. Bowhead, right, gray, blue, humpback, and some stocks of fin whales have been depleted to well below their optimum levels. The first five are now protected by agreement within the International Whaling Commission, an organization whose membership includes most—but not all—of the world's whaling nations. Unfortunately, efforts at international regulation have consistently been too little, too late. It is not enough to seek protection for a species only after its numbers have been so reduced as to threaten its existence—this minimum action is not resource management. Restraint should be exercised early enough that the species remains sufficiently abundant to fulfill its role in the marine ecosystem. It seems reasonable to assume that a species held at the level of maximum sustainable yield (MSY) is still a major element in the ecosystem and that the policy of harvesting at MSY is therefore not at variance with considerations of ecology.

It was this philosophy that led the Secretary of the Interior to place eight species of great whales on the Endangered Species List last December, an action which will prohibit importation into the United States of any products of these eight species. Five of these, as we mentioned earlier, were already protected partially by international agreement and are, in fact, exceedingly rare. The other three, the finback, sei, and sperm whales, constitute virtually the entire catch of today's whaling expeditions. Roughly 25% of this catch was being imported into this country. Although these three species are not in danger of imminent extinction, it was clear to most knowledgeable scientists that they could become so if the current rate of commercial exploitation remained unchecked. In consort with Interior's action, the Secretary of Commerce has banned all commercial whaling by U.S. firms after the close of the present season.

We sincerely hope that the actions of this Administration will set an example to other whaling nations and will lead to both rational management of all international whale stocks and to effective control over the activities of all whalers. At such time as these objectives are attained, this Department will seriously consider the delisting of any species of whale whose future survival is assured at optimum level.

Last month the Department of the Interior in cooperation with several other Government agencies and private conservation organizations held an International Conference on the Biology of Whales. It was attended by nearly all the world's leading authorities on whales, except those in the Soviet Union. It became clear that these scientists are deeply concerned with the need to halt the current rate of exploitation of certain whale stocks and to institute realistic quotas that provide management of each individual species and stock. They also urged the adoption and implementation of an international observer scheme to ensure that international whaling regulations are adhered to by all whalers.

Unfortunately, for many years the International Whaling Commission has often ignored and has been slow to act on the recommendations of its own Scientific

Committee. This year was no exception. Although quotas were reduced somewhat by the IWC, the Blue Whale Unit was not abolished and in many cases quotas are above the level of sustained yield for a given species. Tentative agreements have been reached by the Soviet Union, Japan, Norway and the U.S. to exchange international observers, but such a scheme has yet to be implemented.

Despite its past inadequacies, we still look to the IWC as the only organization in being which is capable of managing international whaling. We believe that considerable progress has been made on behalf of the whales in the past year both in this country and abroad, and we are optimistic that more can be achieved in the next twelve months. In short, we are willing to give the IWC one more year to face up to its internationl responsibilities. While we are sympathetic to the call for an international moratorium on whaling, we would prefer to see the IWC adopt a system for the rational management of whale stocks. If an international observer scheme is not implemented during the next Antarctic whaling season or if the IWC at its next meeting in London in June 1972 does not adopt realistic quotas for individual species, we would have no choice but to urge an international moratorium on all whaling.

STATEMENT OF LEWIS REGENSTEIN, WASHINGTON COORDINATOR, COMMITTEE FOR HUMANE LEGISLATION, 26 JULY 1971

Mr. Chairman and members of the Committee: I appreciate the opportunity to express the views of the Committee for Humane Legislation and its President, Miss Alice Herrington, on the urgent problem of saving the whales from extinction. We urge that the resolution calling for a ten year moratorium on the killing of whales be passed by the House and that an immediate ban on the import of all whale products into this country be instituted. For some species of whales, this year is perhaps our last chance to save them.

Unless drastic and immediate action is taken, several of the larger species of whales will soon be reduced in numbers to a point at which their extinction will become inevitable. Eventually, if the present whale hunting trend continues, most other whales, including the porpoises and the dolphins, may also disappear. This impending tragedy can and must be prevented.

Whales are among the most intelligent and highly evolved of all the world's creatures, in some respects very much like their fellow human mammals. Many of these warm-blooded, air-breathing mammals are monogamous; they nurse their young and usually bear a single calf every two years. They "cry" in agony when they are wounded by a harpoon; and the "song" that the Humpback whales sing is so beautiful and intricate that it has inspired a symphony and been made into a popular record album. There have been many incidents in which a whale has been harpooned or captured by a boat, and its family has followed it or waited offshore for its return for days and weeks at a time. Whalers have taken advantage of this "protective" and highly social characteristic by harpooning baby whales, towing them into the whaling station on shore, and then butchering the entire family or even the herd which faithfully follows along.

According to history and legend, man's relationship with whales has, until comparatively recent times, been a quite friendly one. The prophet Jeremiah made references to these "monsters of the sea", and the whale which the Bible tells us swallowed Jonah not only did him no harm, but also saved him from drowning. Paintings and woodprints from early sea-faring peoples show ancient sailing ships followed and surrounded by playful, friendly whales. Countless sea legends abound in which dolphins are credited with saving the lives of drowning people. Naturalist Tom Garrett has described how primitive peoples living in coastal areas and along large rivers have traditionally utilized whales as part of their culture, using cooperative dolphins to herd fish into their nets, or even to protect them from dangers such as piranha fish. Historical accounts describe this relationship as being so close that the native peoples have violently resisted efforts of scientists to obtain dolphin specimens.

Of all the whales now disappearing, perhaps the most tragic loss is that of the mighty Blue whale—the largest creature ever to inhabit the earth. The Blue whale is so closely related to man that it has a nearly identical body temperature and a remarkably similar brain, eye, and circulatory system. Since these whales have vestigial hipbones which are unconnected to the rest of the skeleton, there has been speculation that its ancestors once inhabited the land, returning to the sea in pursuit of food or—ironically—protection.

It is difficult to conceive of the enormity of this leviathan, but Associated Press writer John Barbour describes its size in graphic terms:

"Nothing on earth has ever matched its size. It is larger than 30 elephants; larger than the combined size of three of the largest dinosaurs that ever lived. It weighs more than 2,000 people, a small town. Its heart weighs 1,200 pounds, its liver a ton, its tongue more than one-third ton. The Blue whale calf nurses for seven months, taking in as much as 1,000 pounds of milk per day."

Yet, this gentle creature has a throat so small that it cannot swallow any fish larger than a sardine.

At the beginning of this century, the Blue whale population was over 100,000; today, a mere few hundred at most survive worldwide (some estimates go as high as 3,000). There is serious doubt that enough males and females will be able to find each other over the great expanse of the ocean to enable the species to breed and perpetuate itself. Dr. Small, in his definitive book on the Blue whale, points out that had we allowed just 60,000 Blue whales to survive they could have supplied the world with 6,000 Blue whales a year without diminishing the stocks. This perpetual source of food—enough to supply a 6 ounce steak to over 3 million people every day for a year—has now been destroyed.

At the present time, other whale species which are gravely threatened include the Humpback, Sei, Finback, Bowhead, Sperm, Grey, and Right whales. The Asiatic Grey whale population has apparently disappeared; and the largest known colony of nominally protected Southern Right whales was wiped out "to the last mother and infant" in 1962 by a whaling fleet off Tristan de Cunha. The state of depletion of the ocean's whale population was vividly demonstrated during Sir Francis Chichester's recent voyage around the world, during which he saw only one solitary whale. A few years earlier, almost daily encounters with these curious and friendly creatures would not have been unusual.

Our Government is clearly implicated in this tragedy. As a major importer of whale meat (used for dog and cat food and on mink farms), and whale oil (used in paint, transmission oil, tanning leather, and cosmetics), the U.S. has helped to generate the demand for whale and thus encouraged their indiscriminate slaughter. While Japan and the Soviet Union account for most of the world's whaling, the U.S. consumes almost a third of the take. Walter Hickel's last act as Secretary of Interior was to place the eight large whale species on Interior's Endangered Species List, thus banning the import of their products into this country. This action, unfortunately, came too late to have much of an effect. In praising this gesture, the New York Times pointed out, "the magnificent Blue whale may already have passed the point of no return and be headed irreversibly towards extinction. The rare Grey, Humpback, and Bowhead whales are also gravely threatened—and all in the interest of such vital products as cat food."

If whales had been placed on the Interior Department's endangered list a few years earlier, it is probable that they would not be in the tragic situation they are in today. Such a step would have been consistent with the Endangered Species Conservation Act of 1969, the intent of which is to prevent such conditions before they occur. It should be emphasized that at the present time, only eight species of whales are banned from import into the U.S. The remaining eighty-some varities may continue to be hunted, killed, and imported, presumably until they too reach the brink of extinction.

The whaling industry is already anticipating the day when there will be no more large whales left to "harvest." They will be replaced by dolphins and porpoises—among the most friendly and intelligent species of whales—which are already being killed in extra-ordinary numbers. Last year the Japanese are estimated to have "taken" some 200,000 dolphins and porpoises, with perhaps an equal or greater number being caught in nets and inadvertently killed by Japanese and American fishermen. According to Professor Kenneth Norris, Director of the Oceanic Institute at the Kakapuu Ocean Center in Hawaii, these creatures will soon face extinction, since they can be used as a substitute for whale meat in dog and cat food.

The real tragedy of this situation is that whales are being killed quite unnecessarily. As Senator Fred Harris pointed out when he introduced his and Representative David Pryor's bill to protect whales and other ocean mammals:

"For the sake of money—primarily the American dollar—these animals are subjected to massive brutality and slaughter. There is no product from any of these creatures which is essential for human survival or welfare. Each has a readily available substitute."

The international organization which has the responsibility for regulating whaling and setting quotas which will not deplete the species is the International

Whaling Commission (IWC). This body, however, has been so dominated by the commercial interest groups that it has allowed whales to be slaughtered far beyond any reasonable limit. The IWC has often been charged with greed and shortsightedness in allowing the primary source of income of its members to be wiped out rather than adopting the sustained yield concept. Lately, however, a new theory has gained credence which does, in fact, make more sense. According to Tom Garrett, in a paper prepared for Friends of the Earth, the whaling interests which control the IWC decided some time ago that it would be more profitable for the whaling industry to kill off the world's remaining whales and take a short-term gain rather than to kill a limited number every year over an indefinite period. The conclusion that such a decision was intentionally made is almost inescapable: it does not seem possible that the IWC could have been unaware of what effect its quotas were having on the whale herds.

Congress is now presented with the opportunity to help save the world's remaining whales. In a few weeks, hearings should be held on the Harris-Pryor Ocean Mammal Protection Act, which would protect whales in U.S. waters and ban the import of their products into this country. In the meantime, the resolution requesting the Secretary of State to call for a ten year moratorium on the killing of whales—which unanimously passed the Senate—should be given immediate and favorable action by the House. It is a necessary first step which must be taken if the whales are to be saved. If the Secretary of State vigorously carries out his mandate to negotiate such a moratorium, he should meet with some measure of success. Surely the Japanese, for example, care more about their electronic and automotive imports into this country than they do about the relatively small profits they derive from their whaling industry.

Meanwhile, the U.S. should immediately ban the import of all whale products into this country. This will quickly have the effect of removing some of the economic incentive for the killing of the whales.

If the U.S. does not take the lead in protecting these unique and awe-inspiring creatures, they will soon vanish from the seas forever.

STATEMENT OF TOM GARRETT, WILDLIFE CONSULTANT FOR FRIENDS OF THE EARTH

Mr. Chairman, the resolution presently before this committee requesting an international moratorium on whaling, follows over two centuries of unbridled and insensate carnage. The 18th and 19th century whalers ravaged and destroyed, one after another, the initially enormous populations of northern and southern Right whales, leaving only scattered survivors. By the middle of the last century, the Bowhead or Greenland whale had also been brought close to extinction, while the "Scrag whale" of the Atlantic coast, which is now believed to have been a Grey whale population, or perhaps subspecies, had been entirely annihilated.

Whalers, working off season, were responsible for much of the havoc wreaked on other marine mammals, such as the Northern and Guadaloupe fur seals, the Sea Otter and the Elephant Seal. They figured prominently in the decimation of Galapagos turtles and Barren Lands caribou; the extermination of the Great Auk, the extinction of several birds through the introduction of rats to isolated islands, as well as the ruin of isolated natives (such as the Marquesian Islanders) by the transmission of syphilis. Maurauding whalers achieved the extinction in a few short years of the Stellar Sea Cow, a giant relative of the Manatee, which may have weighed up to three tons and once abounded off the Northern Pacific coast. Stellar, in his journal, describes these animals as having shown "signs of a wonderful intelligence . . . indeed an uncommon love for one another, which even extended so far that, when one of them was hooked, all the others were intent upon saving him * * *."

During the late 19th century, whalers equipped with lethal cannon harpoons called "Greener lances" brought the California Grey whale to the very verge of extinction. The favorite tactic was to harpoon the infant whales and tow them to the shore stations. The parents of a wounded infant would follow, vainly attempting to aid it, and the whole family could then be killed at a convenient location. Similar methods were employed against the toothed whale Hyperoodon after the whalers learned that when one animal was harpooned, the entire group would remain and attempt to protect it, each whale staying with its stricken companions until the last was killed.

Early in the 20th century the whalers turned their attention to the Rorquals, previously too fast and too strong to be taken and "wrong" from the whaling standpoint in that they did not, unlike the unfortunate "Rights", float when killed. In 1904 the Antarctic waters, populated seasonally by a vast host of heretofore unmolested whales and other marine mammals, were invaded; first from shore stations, then by pelagic whaling fleets operating with floating factory ships. The resulting carnage, in terms of literal bloodletting, was entirely without precedent. Fleets from an increasing number of nations, armed with an always more devastating array of weapons, steamed south for the Antarctic summers, until the krill beds were stained with the blood of the leviathans.

Authors such as Professor George Small, John Barbour and Georges Blond have provided detailed accounts of the great massacre. By 1942 when World War II brought a temporary halt to the killing of whales, the Antarctic population of Blue whales, estimated to have initially stood at 210,000 (Galland) was reduced to perhaps one-third of this figure, and the baleen whales generally, not only in the Antarctic but throughout the world, were melting away before the brutal technological onslaught.

On December 2, 1946, an International Whaling Convention was signed in Washington, D.C. by 17 nations. An International Whaling Commission was established, to begin functioning in 1948. This Commission was charged with responsibility for the conservation and sensible utilization of the world's whale resources, protecting "overexploited" whale species, setting minimum size limits below which various species might not be taken, setting maximum annual quotas for the Antarctic killing waters, and closing designated areas to hunting.

In June, 1971, the International Whaling Commission held its 23rd annual meeting. This year the Commission for the first time since assuming the "management of cetacean resources", convened in Washington, D.C. The results of this "management" may be readily grasped through the following table, prepared for the Senate hearing on Senate Joint Resolution 115 by John Sayres of the Fish and Wildlife Service.

Species	World population in 1930–40	Current population
Blue whale	100,000	600–3,000
Finback whale	400,000	100,000
Sei whale	150,000	75,000
Sperm whale	600,000	250,000
Humpback whale	100,000	2,000
Right whale	(1)	25–250
Grey whale	(1)	10,000
Bowhead whale	(1)	?0–200

[1] Rare.

As can be seen in this table, which contrasts estimated populations during the period 1930–40 with those presently in existence, two very common species, Blue and Humpbacked whales, have been pushed close to extinction; Finback numbers have been cut to, at most, 25 percent of the populations of 30–40 years ago; Sperm whales have been reduced to little better than 40 percent and Sei whale numbers have been cut at least in half. Only the California Grey whale, which lives much of the year in or near Mexican and U.S. territorial waters has increased in numbers.

Since a hiatus in whaling occurred during World War II, this appalling depletion in the stocks of whales occurred entirely under the aegis of the International Whaling Commission. The past two decades have been by far the most sanguinary in all the slaughter glutted history of commercial whaling. During the later 1950's and early 1960's, even as population numbers disastrously plummetted, new records were set for the killing of whales. In 1962 the worldwide kill reached 67,000, far above the maximum kill of laissez-faire whaling.

Twenty-three years after the advent of its "conservation management", the IWC stands exposed as a tragic farce, discredited and impotent. The whale stocks it proposed to conserve have been reduced, for the most part, to pathetic remnants. The bulk of the original subscribers to the convention have been forced to cease whaling because of a dearth of victims, while the remaining pelagic whalers, notably Japan and Russia, are proceeding implacably toward brining to "commercial extinction" all appreciable whale stocks which do remain. Pirate fleets,

using cheaply acquired surplus whaling equipment, are now proliferating, entirely out of control, and promise to finally doom several hard-pressed species nominally under the protection of the Commission; to clean up what few whales may survive the juggernaut of the major pelagic fleets.

The Commission's budget for the year ending May 31, which is the total amount spent worldwide on the "management and conservation" of whales, was approximately $16,000.

The domination of the Commission by the commercial whalers has been, in the past, overt and undisguised. Until 1966, the Japanese commission was automatically the current chairman of the Japan Whalers Association. The delegations to the recent meeting in Washington were liberally sprinkled with presidents and officials of various whaling companies throughout the world. The Commission chairman of the past year, Mr. Fujita, is president of the Japan Fisheries Association, and known to be intimately connected with whaling interests.

This year, these men, following the usual intransigent pattern, again ignored the recommendations of their own scientific committees in order to set far higher quotas than were considered sustainable. The major whaling nations, armed with a power of veto which they have never hesitated to employ and with the simple knowledge that the Commission has no actual power of enforcement, calmly overrode the efforts of non-whaling nations such as the U.S. and the U.K. to exert a moderating influence.

Even as the Commission conducted its June meeting, wholly oblivious to the rising clamour of conservationists around the world, remorselessly parcelling out the relicts of the once vast populations to those who profit from their immolation, the end was clearly in sight: an end of whaling with an end of the great whales; an incidental end to the dolorous travesty of "conservation management".

Any argument to the effect that the adoption of the resolution presently under consideration might jeopardize the future of the Commission runs immediately athwart of this simple fact; as it permits the "commercial extinction" of whales, and thus the demise of whaling, the Commission is already, to say the least, "jeopardizing" its own future.

Complaints that the "leadership" or influence of the U.S. delegation within the Commission might be threatened assumes that such leadership has existed, or will exist in the future. So far the role of the U.S. Commissioner has been entirely negligible. There is no reason to believe, given a continuation of the previous U.S. official attitude, that this can or will be otherwise in the future. The impotence of the non-whaling nations was demonstrated—if it requires demonstration beyond the ravaged condition of the whale stocks—when Japan, Russia and Norway ignored U.S. assertions that 1933 Blue Whale Units represented the maximum possible sustainable yield for the Antarctic, and set quotas for 2300 Blue Whale Units. The Russian delegation insisted, in fact, on 2700 BWU, and has yet to provide any concrete assurance that it intends to abide by the 2300 figure.

The International Whaling Commission has long been anathema to conservationists throughout the world. Evidence of the total discreditation of the Commission in this nation today, resides in the present joint resolution, unanimously passed by the U.S. Senate. Popular disillusionment has been eloquently expressed by numerous editorials in major newspapers, with the prevailing concensus perhaps most cogently stated through an editorial in the *New York Times* on July 6, which likened the recent actions of the Commission to "telling a firefighter to pour on slightly less kerosene."

"Yet," the editorial continues, "there is a rationale behind this grotesquerie. It is to be found in the greed and ruthlessness of the Japanese and Russian whaling interests who between them now catch more than four-fifths of all whales. Financially, it makes more sense for them to use their whaling fleets to full capacity until all whales have been exterminated, and then scratch the equipment than it does to cut back whaling to the small operation which nature can sustain. Whale products are used largely for catfood and cosmetics."

"By its callous performance, the Whaling Commission stands self-exposed as a cartel dominated by its two largest members rather than a responsible international agency for the regulation of a diminishing natural resource. The other member nations which have reduced their whaling or—like the United States—have ceased altogether now face a serious decision. They cannot much longer continue as acquiescent partners while the Russians and Japanese pursue their extermination policy to its logical end."

The International Whaling Commission has failed utterly. No pseudo-scientific analysis couched in arcane jargon, buttressed by unintelligible arithmetical prestidigitations, can disguise the fact that the great whales are being effaced

from the world's oceans; that an entire order of magnificent animals has been mindlessly decimated; that a previously enormous marine resource has been largely—perhaps irreclaimably—destroyed.

The 1946 Whaling Convention was founded on narrow and entirely inadequate concepts. The initial concern of the subscribing governments was, in fact, to rebuild the whaling industry, shattered by World War II. No provisions were made for meaningful inspections to determine compliance with regulations. No budget was provided for meaningful scientific study. The Convention permits a member government to veto, or ignore, policies not to its liking, and leaves the matter of control of its nationals solely up to such a government.

The Whaling Convention predated the understanding—now forcibly borne upon us—of the interrelationship existing between living forms, and the almost endless ecological implications of major disruption. The Convention contains no expression of ethic, nor definition of moral responsibility.

A Commission founded on this inadequate and obsolete Convention could not be expected to now avert the disaster in which it has heretofore played such a key role.

No action short of an international moratorium can now be expected to save the great whales. such a moratorium, if achieved and enforced, will not only guarantee the survival of most species, and permit a slow rebuilding of the populations, but will provide a period for rational study and reassessment, and perhaps the forging of a new and adequate international agreement for the use of marine resources.

The bankrupt legal doctrine of *res nullius* (belonging to no one) must be abolished. It must be replaced with a doctrine of *res communis* which takes into account the interconnectedness of all life, and which considers the destruction of any life form, the degredation of any ecological system, as an intolerable threat to all.

The adoption of H.J. Resolution 706, perhaps with language slightly modified to provide the State Department greater flexibility in negotiations to be most vigorously pursued, will represent a necessary and valuable initial step in moving toward this absolutely essential goal.

Society for Animal Protective Legislation

STATEMENT IN FAVOR OF H.J. RES. 706 AND H. CON. RES. 375 BY CHRISTINE STEVENS, SECRETARY

There are many reasons for seeking a total ban on the killing of all species of whales for the next ten years. They range from the purely and coldly practical through the warmly emotional to the best kind of intelligent idealism based on scientific understanding. I believe the distinguished members of this Committee will wish to take all of these reasons into account. Each is compelling in its own right.

To begin with basic practicality: the whaling industry is moving rapidly to the position of the man who killed the goose that laid the golden egg. Indeed, if we equate each species of whale with one of these magical geese, the whaling industry has already killed a number of them, making them commercially extinct through the same kind of emotional greed that caused Aesop's fabulous goose owner to destroy his own means of livelihood.

If all the whaling is discontinued for a ten-year period, there can be no doubt that the numbers of whales will increase decisively, and even those species that the industry preferred, before they had overkilled them to the point that they are now economically without value, might be able to come back in numbers. But this cannot possibly happen unless they are given a respite from the highly mechanized procedure by which they are spotted from the air, chased by powerful and speedy catchers, terrorized with specially developed whale scaring sounds, ripped apart by explosive harpoons and ground down with startling speed into commercial products. Any country which seriously depends upon whaling cannot fail to welcome a moratorium observed by all countries, for such a moratorium is like money in the bank.

Without a moratorium, the past history of whaling and of the organization which is supposed to control it, shows clearly that there will be continued destruction of the whale populations till all the money in the bank, all the golden eggs, are gone forever.

If we were only concerned, still from the practical standpoint, that a few whaling companies or government whalers were foolishly squandering the source of their

profits, it would not be proper to take this Subcommittee's valuable time to consider the matter. However, the few shortsighted industry representatives who have, unfortunately, dominated the International Whaling Commission to such an extent that even our own State Department seems to have caught the disease of industry orientation, do not own the whales. These magnificent wild mammals with brains bigger than any other form of life that exists or ever has existed on this planet, belong neither to any individuals nor to any country. If we stand by and watch (as we have done up until 1970 when Secretary Hickel broke the spell) the killing off of species after species, we are guilty of depriving the whole world of creatures whose potentialities have not yet even been measured.

At the lowest level, the whales could supply large amounts of protein, should overpopulation force us to the point where palatability no longer matters. If they are killed off to supply meat for mink farms, that form of insurance against our own starvation is eliminated.

It would be completely wrong, however, to think of whales solely in the terms in which the whaling industry considers them: as sources of salable meat and oil. By far the greater concern in the 1970's is the opportunity they offer to teach us, fellow mammals, about life in the sea. The United States Navy is well aware of this, as they learn how to work with dolphins, those marvelously cooperative creatures who actually seem to enjoy being helpful to our species. The Washington Star summed up with an editorial March 29, 1967 as follows:

"The dolphins are at it again.

"A couple of weeks ago a Florida couple adrift offshore in a crippled boat found themselves surrounded by sharks and heavy weather approaching. Suddenly, like the U.S. Cavalry at Fort Laramie, a school of dolphins appeared, tore into the sharks and chased them away.

"The dolphins then escorted the boat back to shore, going away from time to time, but reappearing faithfully whenever a shark's fin slit the water.

"Wait. That's not all. The Navy has been training the friendly fish—mammals, actually—to recover torpedoes, mines, aircraft and submarines lost at sea. Using their built-in sonar, the dolphins find the wrecks, mark them and release buoys for their recovery. Although completely free in the open sea, at the completion of their tasks they swim back to the mother ship.

"Experiments continue in talking to dolphins. Apparently they can repeat human phrases, only faster, a speech equivalent of speedreading. Their own communication by beeps is in the process of decoding by humans. Moreover, the dolphins have provided the most human regular shows on television for several years now.

"It may be, as the old legend of the sea has it, that dolphins are inhabited by the souls of drowned sailors from Phlebas the Phoenician on. At any rate man began his whole terrestrial progress in alliance with the horse and the dog. If we are about to explore, colonize, farm and inhabit the seas, we could have no better ally.

"It may even be, considering their friendliness and helpfulness, that we could learn something from the dolphin."

The Journal of the American Veterinary Medical Association, October 1, 1966, noted: "Major objectives in the Navy's research, Dr. Wood explained, are to determine and measure the capabilities of these animals to aid man in the ocean environment in which man is ill-equipped to operate. In their study of one of various remarkable adaptations which porpoises have evolved to their aquatic environment—a sonar system that differs from man-made sonar—two research workers have found that their female bottlenose porpoise named Doris can distinguish copper plate from aluminum plate by echo ranging alone. She permits the workers to place soft rubber suction cups over her eyes, then swims to the opposite side of her tank to push one of two paddles. These are made of the two different materials, and Doris selects the one she has been trained to push."

Doris is not the only dolphin or porpoise willing to cooperate with scientists. A report in The Philadelphia Inquirer, January 2, 1970, headed "Porpoise Solves Puzzle of Bends, Divers' Disease" tells about Tuffy, another friendly Navy porpoise. "The scientists trained Tuffy to dive on command, stay at depth until summoned to the surface, hold his breath until ordered to exhale and finally to exhale into an inverted funnel a small distance below the surface, through which the exhaled breath could be trapped and analyzed." No wonder the Russians have officially dubbed the dolphin "Man's marine brother" and forbid killing of these animals in Russian waters.

In our country, one state has made it "unlawful to catch, attempt to catch, molest, injure, kill, annoy or otherwise interfere with the normal activity and well being of porpoises." This law was passed in Florida in 1967. It does permit their

capture and maintenance in captivity when the director of the board of conservation is assured that the animals will be properly treated and the species is not adversely affected by the existence of permits for this purpose.

How appalling, then, to learn that last year an estimated 200,000 dolphins and porpoises were killed by the Japanese whaling industry! Nor can we be complacent on this score, for we may be killing almost this same number by mistake, incredible though that seems. Purse-seining for tunafish captures great numbers of dolphins, and they are not untangled and set free, even though it is they that led the fishermen to the tuna. The ancient Greeks were not such ingrates. Not only were they most careful of the dolphins that helped them to fish, not only did the dolphins eat their share of the fish, but according to Pliny the Elder, the dolphins "are aware that they have had too strenuous a task for only a single day's pay, they wait there till the following day, and are given a feed of bread mash dipped in wine, in addition to the fish."* Oppian, too, reported on the cooperation between fishermen and dolphins and wrote, "But when the work of capture is happily accomplished, then the dolphins draw near and ask the guerdon of their friendship, even their allotted portion of the spoil. And the fishers deny them not, but gladly give then a share of their successful fishing; for if a man sins against them in his greed, no more are the dolphins his helpers in fishing."*

Pliny tells us of the ancient Greek fishermen "even if they find [the dolphins] fast in their net, yet they set them at liberty."* We should have the honor and decency that the ancient Greeks displayed. Let us hope that after this subcommittee has acted our historians will be able to say the same of us that Pliny and Oppian said of their contemporaries.

With respect to the great whales, we have taken tremendous forward steps in the last year. First, Secretary Hickel and then Secretary Stans acted with the most commendable effectiveness to remove our country from both the pursuit of whales and, most importantly, from the purchase of products from any of the eight species of whales now on the Endangered Species List. If other countries who buy the meat and oil of whales follow our lead in these actions of the present administration and in the recent action of the Senate in unanimously approving S.J. Res. 115, identical to H.J. Res. 706, whales and dolphins could be saved.

Dolphins are more manageable than the large whales, but those who have intelligently sought to learn about their huge counterparts have found a similar fascination, a surprising gentleness, a deep concern for fellow whales, and a kindliness toward humans which we have ill repaid. Stan Wayman seeking to photograph whales under water tells of the care the enormous creatures took to avoid him with their fins which could easily have cut him in two as he swam near them. We know that the whalers have often taken advantage of the love of parent whales for their young to capture the adults after harpooning the infants.

Let us examine the method now universally in use to capture whales. Dr. Harry Lillie who sailed as a surgeon on a whaling ship has given a vivid description of the explosive harpoon. "The larger whales," he writes, "may be 80 to 90 feet long. To see one of these magnificent creatures swimming close to a catching vessel is a wonderful and thrilling experience. It is just the poetry of majestic motion.

"The present day hunting harpoon is a horrible 150-pound weapon carrying an explosive head which bursts generally in the whales' intestines, and the sight of one of these creatures pouring blood and gasping along on the surface, towing a 400-ton catching vessel by a heavy harpoon rope, is pitiful. So often an hour or more of torture is inflicted before the agony ends in death. I have experienced a case of five hours and nine harpoons needed to kill one mother blue whale.

"If we could imagine a horse having two or three explosive spears driven into it, and then made to drag a heavy butcher's truck while blood poured over the roadway until the animal collapsed an hour or more later, we should have some idea of what a whale goes through.

"Radar, Asdic and aircraft have been brought in to join forces with faster and faster catching vessels, yet the general adoption of a new and already satisfactorily tested humane electrical harpoon is held up by selfishness on the part of many people in the industry."

These words were written in 1958. No progress whatever has been made in the intervening years in reducing the agony of the whales. The whalers have but one single object in view: cash on the barrelhead.

It has sometimes been argued that those who would protect whales are emotional and that their emotion discredits their efforts. Emotions of sympathy and

---

*Pp. 170-171, "The Dolphin: Cousin to Man," by Robert Stenuit (Penguin Books, 1971).

horror surely do enter into the motivation of all who plead with the distinguished members of this Subcommittee to take favorable action on a resolution calling for a ten-year international moratorium on the killing of all species of whales. However, greed is inspired by emotions which our daily newspapers show to be far more powerful than any which help conservationists and humanitarians to pursue their goals. The daily total of those who risk imprisonment for theft, who put their reputations and livelihood in jeopardy for fraud, vastly exceeds that of persons who take even a modest risk in behalf of a friend or relative, to say nothing of other human beings or animals. If emotion is to be discounted according to its force, then the place to discount it is among those who pursue the whales so relentlessly, immune to rational presentation of data which proves that they are constantly and consistently killing more whales than the maximum sustainable yield will allow.

When I first became interested in trying to help whales in 1958, the effort was to substitute a quick killing electric harpoon for the hideous torture of the explosive harpoon. At that time there still seemed to be a hope that the quota system could protect whale populations to the extent that they would not become ecologically extinct. If a painless method of killing could be adopted humanitarians would have been satisfied. But in the intervening period it has become crystal clear that (1) whalers will not change to humane methods under the present system of whale management, (2) the quota system is a failure, and (3) whales are even more remarkable creatures than we could have imagined.

The only way to help whales now is to declare a moratorium on their killing. During the moratorium these magnificent animals should be studied, not merely to determine how many might be killed without wiping out the different species, but, most importantly, in order for us to learn from them as well as about them. A period of open-minded naturalistic scientific study of the whales should be undertaken. It need not be impractical research. On the contrary, the Navy's work in this area, emphasizing as it has the careful study of individuals, each one treated more like a human volunteer for an experiment than like an expendable tool, is a model in the attitude toward research with Cetacea which should be vastly expanded.

You have heard the recording of the Songs of the Humpback Whale. Although you have not heard the New York Philharmonic's rendition of Alan Hovhaness' composition which features these whale voices with a full human symphony orchestra, I am sure you cannot fail to recognize that extraordinary beings brought forth this music. Strangest of all, whales have no vocal cords. It is said that if they did and could scream while undergoing the indescribable torment of the explosive harpoon, not even the most hardened whaler would be able to continue to kill them. Having heard their songs, I believe you can imagine what their screams would be and that you will act favorably on H.J. Res. 706 or H. Con. Res. 375 instructing the Secretary of State to call for a moratorium on their killing.

Mr. FRASER. In addition to the four scheduled witnesses we have with us Dr. J. L McHugh, Chairman of the International Whaling Commission and U S. Commissioner to the Commission. He is on my far left here.

With us also is Mr. E. U. Curtis Bohlen, Assistant to the Secretary of the Interior. Mr. Bohlen is back there in the first or second row.

As indicated earlier, Professor Ray from Johns-Hopkins and Mr. Frank Potter from the subcommittee staff of Mr. Dingell are present also.

I suppose all of you are now open for questioning.

Mr. Fascell, I will let you start.

Mr. FASCELL. Thank you, Mr. Chairman.

It certainly seems a case has been made for some kind of action. I am just wondering, though, given the frustration of international politics, Dr. Small, how realistic it is to say that we are going to be able to do anything, even if we impose the ban. I might vote for it. But before you answer that question in a philosophical sense, let me see if I can understand some specifics, like: What whales, commercially, does the United States pursue? And what is the percentage caught, and so forth?

Mr. McVAY. Until recently the United States has taken less than 1 percent of the world catch of whales. Because of the action of the Department of Commerce this past spring, the last whaling station will be closed down as of the end of this year.

Mr. FASCELL. That is what I understood. That means Japan and the Soviet Union are the major commercial hunters?

Mr. McVAY. Yes, sir.

Mr. FASCELL. What does that amount to in terms of dollars on an annual basis? How big a political impact is what I am trying to get at.

STATEMENT OF DR. J. L. McHUGH, CHAIRMAN, INTERNATIONAL WHALING COMMISSION, AND U.S. COMMISSIONER TO THE COMMISSION

Mr. McHUGH. I doubt it can be quoted in dollars, Mr. Fascell, but it is of the order of 42,000 to 43,000 whales a year, something like that.

Mr. FASCELL. Do we have any kind of guess?

Mr. McVAY. As a matter of fact, for many years, some members of the scientific committee have asked for economic data from the whaling countries, and they have refused to supply it. One estimate is that the annual worldwide whaling operation is now something less than $150 million.

Mr. FASCELL. Nobody knows for sure?

Mr. McVAY. No.

Mr. FASCELL. There are no records of any kind at the Commission level, because the whaling countries themselves are not making that information available?

Mr. McVAY. That is right.

Mr. FASCELL. That is within the purview of the individual companies wherever they are or, in the case of the Soviet Union, the Soviet Government?

Mr. McVAY. That is right.

Mr. FASCELL. Do I understand from the testimony that most of the commercial whaling is for margarine, oil, or lipstick? Did someone say that it is also used for pet food?

Mr. SMALL. Most of it I suspect, in terms of value, is probably whale oil which is used in making margarine and cooking oil. No. 2 is whale beef, for human consumption particularly by the Japanese and, to a lesser extent, by the Soviets. After that, there is a whole series of products. Sometimes pet food, if it is lower quality meat.

Mr. FASCELL. Let us take the first and second commercial uses in the Soviet Union, first and second commercial uses in Japan. What are they?

Mr. SMALL. For the Soviet Union, I suspect oil is No. 1 and meat is No. 2. In Japan, because of the shortage of grazing areas, I suspect it is reversed. I suspect meat is of greater value to them than the oil.

Mr. McVAY. Generally speaking, the Japanese consume the meat themselves, and in the past they export the oil principally to the United States.

Mr. FASCELL. Why don't we ban the import of whale oil?

Mr. McVAY. We have done this.

Mr. FASCELL. How can they export it?

Mr. McVay. They now export it to Europe. They will also continue to export oil to this country until the end of November.

Mr. Fascell. What is the oil used for?

Mr. McHugh. Sperm whale oil is used in high-pressure, high temperature lubricating oils. There is sperm whale oil in the transmission of your car, for example. It is a wax and it stands up very well under heat and pressure at high speeds.

Mr. Fascell. Not in my car.

Mr. McHugh. If you have a car, you probably have sperm whale oil in it, sir.

Mr. Fascell. I thought we banned the import of whale oil. I am confused.

Mr. McHugh. We have been extending permits up to the period of a year. Some of the permits are still viable now.

Mr. Fascell. We have banned the importation of oil except that we make exceptions in certain cases on an annual basis?

Mr. McHugh. No, up to a year after a contract has been negotiated.

Mr. Fascell. Mr. Bohlen?

STATEMENT OF E. U. CURTIS BOHLEN, ASSISTANT TO THE SECRETARY OF INTERIOR

Mr. Bohlen. We have banned all imports of whale products. However, those contracts which were in existence before last December 2 will be honored for up to a year; in other words, up to next December 2.

Mr. Fascell. You mean December 2, 1971 is the end?

Mr. Bohlen. After that, that is the end. This year it is only those contracts that were entered into prior to our listing of the whales.

Mr. Fascell. So the United States will not be available to any commercial company as a market after that?

Mr. Bohlen. Right.

Mr. Fascell. Who else is buying this stuff? You say the Europeans are buying it? They are buying the whale oil, not whale meat? It does not sound to me like meat is something you could ship too easily.

Mr. McHugh. There is another product, whale meal, used in rations for poultry and livestock. A lot of the meat is ground up and used in pet foods.

Mr. Fascell. That will be basically European consumption?

Mr. McHugh. It will be after this year.

Mr. Fascell. You mean, it was basically U.S. consumption until we cut it off?

Mr. McHugh. I don't know the figures, but a good part of it was imported into the United States.

Mr. Fascell. Here again I am exploring this for obvious reasons. If we ban it unilaterally I don't think it will do any more good than the Commission has been able to do. Let's face it. We need to express ourselves and we will probably express ourselves. Once having done that, we will be good guys and that will be the end of it. They will go ahead and use up all the whales.

So I think we have to explore this other business more thoroughly.

Mr. SMALL. I think you have put your finger on the crux of the whole problem. I regret to say, you are absolutely right. I wonder exactly how much good it is going to do, but damn it, I feel we have to do something.

Mr. FASCELL. We are expressing ourselves. I am for you. I have expressed myself. Let us stop it.

Mr. SMALL. I think we must show the world that this must stop. If we can't stop it, who is going to do it?

Mr. FASCELL. I understand all that. I am trying to follow the dollar now. We got past saying something and doing something.

Mr. MCHUGH. I don't want to leave the wrong impression. We are doing something through the International Whaling Commission. As long as the Commission is moving in the direction it ought to go, it ought to be supported.

Mr. FASCELL. I am not being derogatory about the efforts of the United States in any international agency. Believe me. They start out with nine strikes against them. The fact you can be a member of the international unit is to your credit. I don't believe we can do anything, but that is neither here nor there.

We ran into this same thing with respect to the North Atlantic Fisheries in panel 5. And we finally agreed on inspectors, didn't we, Mr. Chairman, in panel 5 in the North Atlantic?

Mr. FRASER. How long has that been in operation? All we have seen is everybody taking the stocks out, while we keep talking about conservation. Anyway, aside from that, Japan uses the whale for human food. Does anybody know how much, how important it is and how cheap it is?

Mr. MCVAY. I learned last year that in the 1960's the percentage of Japan's whaling activity as a part of their total fisheries production declined from 30 percent to 15 percent in the course of just 10 years.

With regard to the meat, they no longer find sperm whale meat very palatable. The baleen whale meat, especially from the sei whale, is consumed entirely by humans. Sperm whale meat is now used almost entirely for pet food. Also, the Japanese prefer almost any other kind of meat to the baleen meat. The oil has been exported mainly to this country and to Europe. It will be exported even more to Europe as of the end of November of this year.

Mr. FASCELL. Mr. Chairman, I know that I have intruded on other people's time. I have a lot of other questions, but let me conclude with one.

If there isn't one, maybe there ought to be one and maybe I can initiate a scientific report that indicates that the mercury level in whales and all the products of whales is well above the minimum set by FDA, which is 0.5. Now that is true for all species except a relatively few number of species. Maybe if we got that message across to a lot of people they would quit using it as food.

Maybe we could eliminate the use of the oil, I don't know. Does my margerine have whale oil in it? If it does, I will switch to buttermilk.

Mr. SMALL. I don't think there is any margerine in this counrty made from whale oil.

Mr. FASCELL. How about the mercury problem so far as the whale is concerned?

Mr. SMALL. I can't answer that.

Mr. CHAPMAN. Of course mercury appears in concentrations in species that are high up on the food chain, such as the tuna and some of the long-lived species, but in the case of the whales, the baleen whales particularly feed only on microscopic organisms.

Mr. FASCELL. If they have been eating the "red tide", for instance, they are dead. Is the plankton that has that disease used by the whale for food?

Mr. CHAPMAN. No.

Mr. FASCELL. If the plankton is at the bottom of the food chain and the whale is the next level, as I understand it, and if the plankton has all this indigestible stuff in it, which seems to be killing everything, it seems to me the whale would have it, too.

That is an easy conclusion as a layman, but how about as a scientist? Are there particles in the fat that don't break down?

STATEMENT OF G. CARLTON RAY, PROFESSOR OF PATHOBIOLOGY, JOHNS HOPKINS UNIVERSITY

Mr. RAY. Only one whale has been examined that I know about. That is the pothead, on the west coast.

Mr. FASCELL. That is a nice name for him.

Mr. RAY. It is a whale not very far up on the food chain. It has about 50 times the level that is permitted.

You brought up an important point. That is the ecological point of view which, of course, as an ecologist impresses me as being an important thing. A resolution such as this, if I may be blunt, is rather ecologically naive for the simple matter that it does not consider the whales in the place where they live. Rather it considers simply putting a moratorium on something, a moratorium which in many people's views, mine included as a conservationist, would have no effect. It cuts us off, to be specific, from not only our international bargaining position, because, if we pass a thing like this, it is liable to be ignored by other countries, but it also cuts us off from our research base.

For instance, how do we find out if there is mercury in the whale? We need to kill the whale. We need to find out about the biology of the whale; we very often have to indulge in a research killing program.

Mr. FASCELL. I don't want to be facetious, but I think you could get some kind of exemption from the Department of Commerce. I don't know what they have to do with it.

Mr. RAY. If you don't have some sort of industry, and we hope that it will become a good management base industry, then you can't find out about the biology of the animals you are trying to manage, which, as Dr. Small points out are very valuable indeed.

We need to build up the animals. What I think we need to do is to build them up while maintaining a small fishing effort. I don't find it very relevant to hear that whales produce music. Cock-a-doodle-doo produces music, too. Whales are smarter than chickens, but it is not relevant to the purpose of this bill. Neither is it relevant to say that whales have a complex social life. So do all the animals, including cows that we eat. The point is to talk good international research and management sense.

I think, as Congressman Dingell pointed out, this bill needs to be expanded to include many of the things that this does not include. For instance, the first sentence, "Moratorium on the killing of all species of whales." That sentence alone kills off the American tuna industry, because the industry uses small whales to find tuna.

Mr. FASCELL. I am going to quit and let my colleague over here, who has been very patient, interrogate. I am going to leave that colloquy with one question. Why kill whales, period?

Mr. FRASER. You are not looking for an answer at the moment?

Mr. FASCELL. No; I can answer that myself without all this gobbledygook.

Mr. FRASER. Mr. Bingham?

Mr. BINGHAM. I would like to hear more on this last point. What is the gentleman's name?

Mr. RAY. Carlton Ray.

Mr. BINGHAM. You said something that interested me. Would you develop the thought that a moratorium on the killing of whales would destroy the American tuna industry.

Mr. RAY. There are many uses to which whales are put. One of the nice uses is that when the little whales, porpoises, traverse the ocean they are eating the same things that many of the animals that we hunt also eat; namely, tuna, marlin, and so forth. When the porpoise follows his food, he does so at the surface, because he is tied to the air-water interface. He is breathing. You can follow the whale and follow the birds. Fishermen use these tools to follow tuna.

In the entrapment of tuna by the large tuna seines, porpoises are also trapped; it is true. It is almost unavoidable. Now the Government agencies are seeking ways, and so are the fishermen, to release the porpoises; but a lot of them are killed. There are some countries—not the United States—that actually go out after the porpoises and the estimated yearly catch is up to 500,000 a year perhaps.

If you pass this resolution as it stands, whales include porpoises; and you can't kill a whale, therefore, you can't go tuna fishing.

Mr. BINGHAM. You understand, I am sure, that this is not legislation in the normal sense. We are talking about a resolution which would request or instruct the Secretary of State to take certain action that doesn't have the detailed specifics you would expect in legislation.

Mr. RAY. I understand that.

Mr. BINGHAM. Certainly there is nothing inconsistent in the idea of a moratorium and the idea of porpoises being used to follow tuna.

Mr. McVay, I would like to ask you to comment, since you are the witness who spoke most favorably of the resolution before us, to comment on some of the points which have been made here, particularly with regard to the effectiveness of what this would do with regard to its sweeping character, the fact that it makes no distinction between species that may not be endangered, and so on; that it is a broad brush.

Mr. MCVAY. I would like to come at that by saying, first of all, that this recommendation, this recommended resolution. is actually not something that is a threat to the International Whaling Commission or the U.S. participation. I think that the U.S. position would be greatly strengthened by taking a very clear-cut and unambiguous stand with respect to the killing of whales.

We simply don't need whales any more; there is no known purpose for which they are used for which there is not a substitute. I think if

the resolution were to go through expressing the will of Congress, that this action will strengthen the U.S. delegation's position at the Whaling Commission meeting next June in London.

With respect to the question about the lack of distinction with respect to species, I think this is a legitimate point which has been raised. However, in the light of the long-term pattern of predation, of what has happened to whales over such a long period of time, a moratorium seems to be a minimum and reasonable step at this point to try to turn the situation around, give a pause, if you will, for scientific studies and to develop the proper international controls if whaling is to resume again in 10 or 20 years.

Mr. BINGHAM. Mr. Blow, are you aware that I have introduced a concurrent resolution which follows in the text exactly the resolution that was passed in the Senate but would not require the concurrence of the President; it would simply express the sense of the Congress, the House and Senate, along these lines?

Mr. BLOW. Yes, sir.

Mr. BINGHAM. Would you have the same objection to passage of that resolution as you do to the passage of a joint resolution which would go to the President for his signature?

Mr. BLOW. No, sir; I would not. I don't think the Department would offer any objection to such a concurrent resolution.

Mr. BINGHAM. May I ask the representative of the Department of Interior whether that Department has a position on that matter?

Mr. BOHLEN. I think we would support it, happily.

Mr. BINGHAM. Support the concurrent resolution?

Mr. BOHLEN. The concurrent resolution.

Mr. BINGHAM. What about the representative of the Whaling Commission, our representative?

Mr. MCHUGH. No, sir; I don't think I would support it, because I don't see what effect it has. I feel we ought to work as hard as we can to help the Whaling Commission to do its job. It has been by no means a disaster. As a matter of fact, if I may address the chairman for a moment, I brought along a statement which might be useful to you about the last meeting of the Whaling Commission, and I would like to submit it for the record.

Mr. FRASER. We will be glad to have it. Without objection, we will put it in the record.

(The statement referred to follows:)

STATEMENT OF DR. J. L. MCHUGH,* U.S. COMMISSIONER, INTERNATIONAL WHALING COMMISSION

The 23rd meeting of the Commission was held in Washington, D.C., June 21 to 25, 1971. The United States went into this meeting with a tough position, which had four major objectives:

(1) implementation of an international observer scheme;

(2) for whale stocks that are clearly overexploited, but still capable of yielding a sustainable catch, catch quotas that are sufficiently below the best scientific estimates of present sustainable catch to ensure that the resource will be rebuilt to the level of maximum biological productivity;

(3) for whale stocks that are not overexploited, catch quotas that are no higher than the best scientific estimates of maximum sustainable catch;

(4) elimination of the blue whale unit as a basis for setting quotas in the Antarctic.

---

* At the 23rd meeting Dr. McHugh was elected Chairman of the Commission for a 3-year period.

Among the matters considered in developing the United States position was the proposal for a 10-year moratorium on world whaling. The proposal was not adopted at this time for the following reasons:

(1) some species of whales are being harvested only moderately, or not at all, and it would not be logical to argue that these species should not be taken, provided that the harvest is adequately controlled;

(2) at least two important species of commercial whale the sei and the sperm whale, probably are not being overharvested now (male sperm whales may be overexploited, but not yet seriously), and they are capable of sustained production under adequate controls;

(3) some countries rely upon whaling for human food and other useful products of commerce, and if a catch can be taken without endangering the resource, there is no supportable reason for calling a complete moratorium on whaling;

(4) a moratorium is already in effect on killing five kinds of whales: the right whale, bowhead, gray, blue, and humpback;

(5) the Whaling Commission, despite the views prevalent in many parts of the United States, has been showing more and more interest in doing the job it was established to do, and we had reason to believe that the 1971 meeting would make substantial progress;

(6) it was our judgment that no other delegation would support a complete moratorium, and this was substantiated in discussions with other delegations at the meeting.

Despite the gloomy reports that appeared in the press following the June meeting of the Commission, it is my view that the Commission did indeed move forcefully toward the goals desired by the United States. Where individual points in the United States position were not met, progress was made on almost all, and commitments were made to reach those objectives next year. If the meeting had been as unproductive as some people seem to think, the United States would not have accepted the Chairmanship.

Substantial progress was made on the International Observer Scheme. Because the scheme will cover the entire ocean, and land stations as well as high-seas fleets, it was decided to establish several schemes, by geographic areas and separately for land stations and by factoryship fleets. Some details still need to be worked out, and, of course, nothing is certain until the scheme actually is in operation, but in my opinion the odds are high that observer schemes will be in effect on most, if not all, of the world whaling industry when the next whaling season opens in December, 1971.

This was by far the most important matter before the Commission.

Over exploited whale stocks are of two kinds: those which have been reduced to such low levels of abundance that the Commission has placed them on the prohibited list; and those which have been reduced below the level of maximum sustainable catch but can continue to yield a harvest while they are being restored to maximum productivity, if rational catch quotas can be agreed upon. The prohibited species are the right whale, bowhead, gray, blue, and humpback. The species which can be restored while still yielding a catch is the fin whale in both hemispheres. It is not generally understood that under the baleen whale quota in the Antarctic the catch of this species has been stabilized for the past six years. The reduced baleen whale quota agreed upon for the 1971/72 season in the Antarctic is not likely to start the recovery process, but neither is it likely to reduce the stock further by very much. One problem in the Antarctic is the wide spread of scientific estimates of the condition of the fin whale resource. According to some of these estimates the catch of fin whales is comfortably below the danger level. It would be prudent to take the pessimistic view when the scientific evidence is not very precise, but when several nations are involved, the majority vote prevails. In the North Pacific the 20 percent reduction in the fin whale quota agreed upon for 1972 will bring the catch within the limits of the scientific estimates of present sustainable catch. It was further agreed that the North Pacific fin whale quota for 1973 will be reduced at least another 20 percent as warranted by the scientific evidence. This clearly should start this moderately overharvested resource back to full biological productivity.

The sei whale resource in both hemispheres is in good condition, and is at or above the level of abundance that will produce maximum sustainable catches. Under the reduced quota in the Antarctic the sei whale is unlikely to be overharvested. Under quotas prevailing during the last three years the catch has been stabilized. In the North Pacific the 20 percent reduction for 1972 will not bring the quota law enough, but the resource probably can stand moderate overharvesting for at least one more year. It was agreed to reduce this quota by at least

another 20 percent in 1973, and this should be adequate to maintain the maximum sustainable catch.

The sperm whale is a much different animal from the whalebone or baleen whales. It is primarily a tropical whale, but the males, which grow much larger than females, migrate north and south into colder waters. The sperm whale is polygamous, like the Pribilof fur seal, and the harvest could be regulated in somewhat the same way, by killing surplus males and some females. This has been done up to now by setting minimum size limits of 38 feet for high-seas fleets and 35 feet for land stations. Few females exceed 38 feet in length. The result apparently has been to overharvest males and underharvest females. But scientific knowledge of the sperm whale is not very good, and the Scientific Committee of the Commission has not yet been able to make very precise recommendations. This year the Commission agreed to hold the sperm whale catch in 1972 at the 1971 level, in the only area of the southern hemisphere where the stocks are reasonably well understood. The 20 percent reduction in the North Pacific for 1972 will bring the sperm whale catch within the limits of the scientific estimate of maximum sustainable yield. The scientists will meet early in 1972 to carry out special stock assessments of sperm whales, especially for the southern hemisphere.

It was not possible for technical reasons to eliminate the blue whale unit as a basis for the Antarctic quota in 1971/72, but the member nations agreed to set limits by species for the Antarctic at the 1972 meeting. Meanwhile, the Antarctic quota for 1971/72 was reduced by 400 units to 2,300 blue whale units. A proposal by the United States for a quota of 2,160 blue whale units was defeated by one vote (three-quarters of the members present and voting is the required majority).

Thus, the major objectives of the United States either were achieved at the 1971 meeting of the International Whaling Commission or will be achieved in 1972. The meeting was not a "dismal fiasco", as stated in an editorial in the New York Times on July 6, 1971. Although the United States did not achieve all of its objectives at this meeting, the Commission made encouraging progress. If the commitments made by other member nations for further action at the 24th meeting are honored, the whale catches by these nations will be at rational levels by 1973, based on the best available scientific evidence, and whaling should be adequately monitored to ensure that the regulations are being observed.

The best strategy for the United States, as long as the Commission continues to make satisfactory progress toward its objectives, is to support the Commission and do everything possible to strengthen it. If the Commission fails, then is the time to give serious consideration to the alternatives, including the moratorium proposal.

Mr. BINGHAM. You say we ought to be working to support the Whaling Commission and working to make it more effective. How are we doing that?

Mr. MCHUGH. I think we are doing that already. I think the Whaling Commission is beginning to take a serious view of its responsibilities. I am encouraged by the progress made at the last meeting. It was by no means a failure. There were additional commitments made at that meeting. Some matters could not be considered for technical reasons. There were additional commitments made which, in my view, will get us where we want to go next year at the next meeting of the Commission.

Mr. BINGHAM. Why would the passage of a concurrent resolution expressing the sense of Congress that there should be a 10-year moratorium, on the killing of whales interfere in any way with the work of the Commission? Why would that downgrade the work of the Whaling Commission?

Mr. MCHUGH. It simply raises questions about what the United States really wants. I refer to Dr. Chapman's statement. There are some species of whales which, by no manner of means, require a moratorium. You see, there is in effect a moratorium on five species of whales already. The other three, if the harvest is properly controlled, can still continue to produce a yield without being completely prohibited.

Mr. BINGHAM. I think Dr. Chapman said that you are not satisfied with the degree to which the fin whale is being controlled.?

Mr. MCHUGH. That is right. I think next year when we finally get rid of the blue whale unit as a means of management and the countries agree not to be bound by the blue whale unit any longer, then we will have the quotas where they should be. It will require a further reduction, but then we will be able to address ourselves in the Antarctic to quotas by species as they should be.

Mr. BINGHAM. Thank you, Mr. Chairman. I have no further questions.

Mr. FRASER. Dr. Small, given the state of the record, which is that the killing of five species has been banned by international agreement and three apparently are considered still commercially exploitable, what additional value is there to a total moratorium?

In other words, presumably what we are talking about then are just three species, since five are already on the banned list?

Mr. SMALL. Yes.

Mr. FRASER. Is it essential to ban the killing of the last three species?

Mr. SMALL. I feel it is, for this reason: If you look at the history of the commercial whaling over the last 900 years, whaling of a given species to my knowledge has stopped only when that species was so reduced that it was beyond commercial competition and of no value. The species which are now protected were protected when they were virtually no more. The stocks of the three important species now being taken are so reduced, I am very much afraid that if we do not stop the killing now and if the killing continues, we may in a few years find all of these species virtually where the others are. And that will be too late, too late because even though they may not be biologically extinct, it will take them anywhere from 50 to 200 years to reconstitute their numbers to such a point that they can be of commercial value to man.

I do not wish to stop the killing simply because killing is killing. I wish to protect these species that they may serve man as food, as medicine, and for many other purposes. But I am very much afraid, in view of the long-term history of commercial whaling, of the inability of the Whaling Commission to make the Japanese and the Russians knuckle under—I am afraid that the only step now is the moratorium.

Mr. FRASER. Dr. Chapman, you indicated that you thought that the sei whale was near an optimum level as far as human utilization is concerned.

Mr. CHAPMAN. And the sperm whale.

Mr. FRASER. I was looking at the chart supplied with Mr. McVay's statement, which shows that the catch of the sei whale sometime in the 1960's reached a figure of nearly 25,000 a year, but dropped off to less than half of that. Can you throw some light on this in the context of your statement?

Mr. CHAPMAN. Yes. This is of course the reduction of the quotas by the Commission. Quota reduction took effect, that is effective quotas took effect in 1965. The time scale is hard to read on this, but this is the approximate effect of that. The quotas which had been at

16,000 blue whale units have been reduced for the coming year, they are reduced to 2,300 blue whale units.

Mr. FRASER. Convert that for me, please.

Mr. CHAPMAN. In sei whales, the catch during the past year was about 6,000 and during the coming year will be about 5,000.

Mr. FRASER. What is the quota now?

Mr. CHAPMAN. In the Antarctic——

Mr. FRASER. What is the quota now?

Mr. CHAPMAN. The quota is still in terms of the blue whale unit, which allows them to convert from one species to another. Six sei whales are one blue whale unit.

Mr. FRASER. If you have one blue whale unit, you multiply by six to get your sei whales?

Mr. CHAPMAN. That is right.

Mr. FRASER. I want a converted figure, if I can get it.

Mr. CHAPMAN. That is about 6,000.

Mr. FRASER. That is the annual quota worldwide?

Mr. CHAPMAN. No; there is a separate quota for the North Pacific.

Mr. FRASER. You say you catch other species, you then diminish——

Mr. CHAPMAN. That is right. The more fins, you catch fewer seis.

Mr. FRASER. When you talk about the blue whale unit, are you talking about some kind of agregate quotas?

Mr. CHAPMAN. Yes.

Mr. FRASER. You have your choice of taking one blue whale or six sei whales?

Mr. MCHUGH. Not a blue whale, because they are prohibited.

Mr. FRASER. I understand they are prohibited now. So that there has not been a quota in effect for each species?

Mr. CHAPMAN. That is correct. There will be one next year in the Antarctic. This has been a sort of overall blanket affair up to now.

Mr. FRASER. When you say "in the Antarctic," what is the significance of that qualification?

Mr. CHAPMAN. There are separate different regulations for the North Pacific. The two main areas for whaling are the Antarctic and the North Pacific. The North Pacific has been regulated differently.

Dr. McHugh can speak much more accurately for the regulations that have gone into effect for the North Pacific.

Mr. MCVAY. The Antarctic fishery did comprise 90 percent of the world's whale catch for many, many years. Because of the overfishing, since 1962–63 more than half have been taken in the North Pacific and increasingly in lower latitudes of the Antarctic below 60°.

Mr. FRASER. What I am trying to do is to see if I can distinguish more sharply the disagreements among you.

Dr. McHugh, you wanted to respond earlier. What do you identify as the principal difference between yourself, for example, and Mr. McVay and Dr. Small? How would you characterize your differences in position?

Mr. MCHUGH. We have exactly the same objective. What we are arguing about are ways of getting to those objectives.

Mr. FRASER. What are the differences now as you interpret them?

Mr. McHugh. It is very clear, my objective is to work within the framework of the Commission, because this is the only viable international mechanism that we have.

Mr. Fraser. I don't think we would quarrel with that, it is the only mechanism we have. We are suggesting that we try to add some bargaining power to your position. That is, we still are proposing to work through the Commission.

Mr. McHugh. Can I be very frank about this, Mr. Chairman? I think it makes the United States look a little silly, because no other nation is going to support it. Maybe some nations that don't whale. You know, we tried this at the Whaling Commission meeting. We talked to the other delegations and not one of them would support us.

Mr. Fraser. If it is a silly or ridiculous position, how is it that the United States is ending all whaling?

Mr. McHugh. I don't agree with this, either. I don't think that is necessary.

Mr. Fraser. That decision was made by a different department?

Mr. McHugh. Yes; I opposed it at the time. Now that the decision has been made, of course, I have to support it and I do support it. But I don't think that was necessary.

Mr. Fraser. From where did that decision emanate?

Mr. McHugh. It came through action of the Secretary of the Interior in placing these species on the endangered species list, and further action by the Secretary of Commerce in stating that he would no longer renew the license of our whalers after the end of this year.

Mr. Fraser. At least for one of the departments of the U.S. Government, the idea of ending the killing of all whales at least for the present has seemed to be a prudent action. But you are suggesting that others won't see it that way?

Mr. McHugh. Yes.

Mr. Fraser. I wonder if Mr. Bohlen might throw some light on Interior's action on this?

Mr. Bohlen. I think all the scientists we consulted, with the exception of Dr. McHugh and Dr. Chapman, felt that some of the world's whales were endangered. There are five species mentioned earlier that are already protected by the International Whaling Commission. However this regulation applies only to members of that Commission, and there is some doubt as to whether all member nations do, in fact, observe this prohibition. Beyond that, as Dr. Small pointed out, there is Japanese whaling in Chile that does not have to abide by IWC regulations. We know of several pirate ships now operating out of the Caribbean, fishing off South Africa, that are responsive to no international law. So the fact that the Whaling Commission has prohibited the killing of these five does not mean in fact they are not being killed.

Furthermore, on the banning of the sei and sperm, we did not feel that they are in danger of extinction right now, but we did feel that if the current rate of commercial exploitation continues they would be in danger. We chose to act while we could, while there were still enough of these whales left. We could bring some rational management to these whale stocks and hope they would eventually be allowed to build back up to a sustained yield.

Mr. Fraser. It is the view of your Department that these three species are not at the right optimum population?

Mr. BOHLEN. We were not satisfied at the last meeting that the International Whaling Commission has in fact brought them completely out of danger.

Mr. FRASER. Dr. McHugh refers to prospective actions at the next meeting. Are you familiar with those?

Mr. BOHLEN. Yes.

Mr. FRASER. What is your judgment about those?

Mr. BOHLEN. In regard to the quotas for the fin and the sei in the North Pacific, if in fact the member nations live up next year to the gentleman's agreement reached this year of a further 20-percent reduction in quotas, it would bring the catch below the sustainable yields estimated by Dr. Chapman. I think we would be pleased with that result.

In regards to the sperm catch in the North Pacific, Dr. Chapman's Scientific Committee and a number of other scientists have expressed alarm at the number of male sperm being caught there. We would like to see a quota set by sex on the sperm whales in the North Pacific and in the Antarctic. Right now, this is scientifically difficult to do. I don't think we know enough. The scientists we have talked to don't know at this point how to go about doing it. I think we would like to see some such regulation by sex to satisfy ourselves that they were being properly managed.

Mr. FRASER. In the absence of the ability to differentiate, does this suggest a lower quota on the sperm whales ought to be followed generally?

Mr. BOHLEN. Yes.

Mr. FRASER. Until we are able to differentiate?

Mr. BOHLEN. Yes; because at current quota you could be harvesting many more males than was desirable.

Mr. FRASER. To your knowledge, is the International Whaling Commission proposing to take action on that?

Mr. BOHLEN. They have agreed to hold a scientific meeting next year, in 1972, to compare scientific notes on everything that is known about sperm whales.

Dr. Chapman can probably fill you in more on that.

Mr. FRASER. As I understand it, the Department of the Interior is taking a position that in view of the history of the depletion of the various species of whales, it is better to move now to try to shut down the whaling industry until we know where we are, rather than to be sort of always lagging behind. Is that correct?

Mr, BOHLEN. Right; I don't think our scientific knowledge on the biology of whales, their life cycle, is sufficiently adequate so that we can be sure that we are acting on sound scientific advice. As an example in the Antarctic, the estimates of finback populations have been particularly far apart. There is a sharp difference between Dr. Chapman, representing the majority of the scientific committee, and the Japanese scientists. It is such a wide difference that it becomes very difficult to agree on what is a proper sustainable yield and, therefore, what a proper quota should be.

Mr. FRASER. Who has the lower estimate?

Mr. BOHLEN. Dr. Chapman.

Mr. MCVAY. Radway Allen's estimates are even lower than Chapman's.

Mr. FRASER. I think Professor Ray wanted to add a comment.

Mr. RAY. In the International Biological Program there is a marine mammal theme, so called. We are in contact with most of the international community of whale biologists, not managers, but biologists. I think most of these people, almost to a man, applauded Interior's action in putting the whales on the endangered species list; but this gave an economic argument that the whale is being purchased by the United States rather than protecting the whales further.

It worries me what we do when we take this next step. As to the next step, Mr. Bohlen has mentioned scientific knowledge. That is where it all comes down to, doesn't it, in the end? You wonder how many there are, how you tell the sexes apart. It is remarkable how truly ignorant we are about the numbers and their distribution. We don't know if the ones in the Northern Pacific intermix with the ones in the Southern Pacific. In 1968 in the world all of the whales were found to be twice older than they thought they were, because they found out they were off by a factor of two.

I think it is very important to maintain even the weak international structure we have in order to keep the communications going and not to isolate ourselves, and particularly from the point of view of the scientists. I have talked to several of them about this House Joint Resolution 706, not to divert ourselves by what may in fact be unnecessary and certainly will make us look a little bit ridiculous to other fishing nations.

I don't agree with much that Dr. McHugh says, but on this I do agree with him. This makes us look a little bit naive, even to the scientists who supported Interior's action.

Mr. FASCELL. You leave me puzzled. If the scientists supported this Department of Interior action——

Mr. RAY. Many did.

Mr. FASCELL. Which I gather was to end any killing of whales——

Mr. RAY. No; any importation.

Mr. FASCELL. I thought your whaling itself was also coming to an end.

Mr. RAY. That was also a later action by Commerce. It was a minor thing anyway. The point is that we said, "OK, we have had enough, we don't want to import any more whales; we don't want to use it." In point of fact, this action does not really affect the rest of the whales so as to make them alter their fishing that much. What we do in the United States, we can't be so naive as to think it makes the rest of the world jump. They still consume whales.

I am concerned in trying to gather a research data base on whales, that this resolution might take us so far out of a position of international cooperation that we can't any longer indulge in international activities. I think the next step has to be to encourage international cooperation and make ourselves look worried but intensely interested in gathering together with scientists, economists, and people of some other nations to support whale data research and put our position forward quite clearly, as I believe Interior has done, that until such time as whale management does become rational, then the United States might be willing to utilize whales like the rest of the world.

Mr. FASCELL. Dr. McHugh has projected some further actions

by the International Whaling Commission next year. Are you satisfied with the actions they took this year and expect to take at the next annual meeting?

Mr. RAY. No, I am not completely satisfied, but I do believe it was as far as it could have gone this year.

Mr. FASCELL. In what respect would you have liked to see them go further?

Mr. RAY. I would like to see them put in the observer scheme quicker, the blue whale unit not used any more, to have the numbers of whales taken reduced further but not to the point of a complete moratorium. We need a small number.

Mr. FASCELL. Dr. McHugh says these things will happen next year.

Mr. RAY. I hope they do. They didn't happen this year. I would have liked to see them happen last year.

Mr. FASCELL. Assuming it happens then, are you satisfied with the management?

Mr. RAY. I am never completely satisfied. Again, speaking scientifically, I believe the whale population should be built past what is commonly referred to in a mathematic sense of simply what is called maximum sustainable yield. I personally don't particularly buy the low levels that constitute a maximum sustainable yield. I would like to see the whales built back to the 1930 levels, personally.

Mr. FASCELL. You would, in general, argue for even lower quotas than they are likely to agree on?

Mr. RAY. Yes; but not to the point of the moratorium. This takes a lot of research tool away from us.

Mr. FASCELL. How do we persuade them to move to an even lower figure than you expect them to move to?

Mr. RAY. I would expect they would move to a lower figure next year.

Mr. FASCELL. But you want it to be lower?

Mr. RAY. Well, lower. How much lower?

Mr. FASCELL. You seem to want to go lower.

Mr. RAY. I would like to go lower, but I still would like to get a different kind of whaling industry, one where you can find out about the industry. You can't find out very much the way the industry is constituted. I would have whaling, research under permit and perhaps a lot of other things that will probably be brought out by Mr. Dingell's hearings. I would emphasize to the world community the United States is worried, but does take not a completely protectionist view—a view based completely on our emotions—but recognizes the fact that whales as Dr. Small has said, are a huge resource representing hundreds of thousands of tonnage of productivity a year.

We need that. There are a lot of people in the world. Let us build it back, but let us maintain a small productivity. I think a moratorium is too negative and will not impress the rest of the world favorably.

Mr. FASCELL. I am pursuing it with you because you have a sort of in-between view here. What action, if any, would you think that the Congress might take that would encourage others to err on the side of conservation, in order to allow the reestablishment of these species above the lower levels that are projected?

Mr. RAY. I don't think there is any single action. I believe it will require a very lengthy answer. Unfortunately, I can't think of any single thing. I think we are dealing here—to put it as simply as I can—with a matter of simple resource management. The whale has captured the imagination of many people. It captured my imagination long ago, and many other people's too.

But we can't simply deal with this from either a protectionist or an exploitative point of view. We have to deal with this as a resource and its potential in the world's oceans. The one way to do this is to draw in our horns a little bit and try to see rationally how many whales are there, what can be supported by building up the stock, and building up our data base, not simply with biometrics, which is the major tool we have now, but through a scientific research program.

I think a joint scientific international research program must be written somehow into whatever legislation we put in in cooperation with the International Whaling Commission and other international agencies that deal with marine mammals. I believe that the one thing that probably must be done is to remove whales from the economic base on which they are based right now. We have to forget economics for a while, because if economics dominates them, the best thing to do economically is to wipe the whales out and go to something else. That would be economic, but it would not be very smart.

We have to somehow forget how much money things are worth all the time and get to building back the resources, and perhaps put a little more into it than we take out.

Mr. FASCELL. Dr. Chapman, you are head of the scientific panel. Do you agree with what has been said?

Mr. CHAPMAN. Yes; I think Dr. Ray has presented a reasonable point of view. I think, as Congressman Dingell spoke earlier, we have to proceed from a scientific base. We have accumulated a great deal of scientific knowledge in the past several years. A great deal of it, in fact, most of it, has come through the catches of the whale. We need more, as everyone has agreed, but this is a reasonable point of view that we do need to improve the scientific program.

Mr. FASCELL. What limitations are you operating under now in that respect?

Mr. CHAPMAN. The limitation now, of course, is that essentially the scientific programs are carried out mainly by the countries that are doing whaling. Japan has a modest scientific program, the largest one. The United Kingdom is carrying out research, although their whaling industry was terminated some years ago. Norway has some research. We do some research on gray whales, a modest amount. Even that was threatened some years back. Fortunately, it was not entirely terminated.

The research programs are very modest. The Commission has no staff of its own to develop a scientific base. The scientific work has to be done by people like Mr. Allen in Canada, myself, and essentially on a very much part-time basis. So that the research which has been done, even the biometric research which Dr. Ray has referred to as the largest part, still has been pitifully small for an industry which has been valued at a hundred million dollars or more.

The other research that Dr. Ray referred to as nonexistent, the kind

of research on stock identification, sonar techniques, and so forth, has been pitifully supported. So that there is a very great need for additional research in this area.

I think a positive approach, rather than a negative approach, saying "Let us start and let us go," I think is very much the desired thrust. I support that point of view very strongly.

Mr. FASCELL. Mr. Frelinghuysen?

Mr. FRELINGHUYSEN. I apologize for having been absent previously. I have not been able to enjoy all the testimony of these witnesses. I am glad to welcome an old friend, Mr. McVay, to the subcommittee today.

Maybe I should begin with you, Mr. McVay. You referred to the whaling business as a little mechanical toy set in motion a century ago that won't stop until it winds down completely. How important is the whaling business? Would it not be possible to simply stop without losing too much? How big a business is it? How vital is it to us or to anyone else?

I know we no longer have some of the uses for whale products that we had in the 19th century. What is the nature of the problem, if there should simply be a cessation of whaling?

Mr. MCVAY. Mr. Fascell did ask about this earlier. In the traditional sense whaling has ceased to be economically profitable.

For example, in 1963 the United Kingdom dropped out. In 1964, the Netherlands dropped out. In 1968, Norway dropped out of the Antarctic fishery. Only two countries are left, and they are essentially low-labor-cost countries: the Soviet Union and Japan. Their investment is of a different sort. Perhaps the Japanese could get out of it relatively quickly, as will happen anyway if their profits continue to decline. But the Soviet Union invested a great sum of money back in 1959 in West Germany, as I mentioned, to build these two very large factory ships which dwarf the size of a sperm whale, for example. They are 750 feet long, in contrast to a sperm whale which is 50 feet.

Certain members of the Commission at that time were terribly concerned—for the handwriting already on the wall—that the Soviets had made such a major investment. So it is going to be difficult for them to get out of it as long as there are some whales swimming around in the ocean. We don't have complete figures on what it would cost the Soviets to quit whaling, because they consume most of the take in their own country. We understand, however, that there is some exportation to Europe of Soviet products, but not very much.

Mr. FRELINGHUYSEN. You strongly advocate a moratorium as allowing an opportunity for international controls to be set up. You also mentioned that there should be a cooperative international effort.

Mr. Ray also said that we should encourage international cooperation. Does a moratorium encourage or perhaps discourage the kind of goal that both of you are seeking? I think this is really what we are talking about. Which is the most practical way to accomplish something soon, not belatedly and inadequately?

I wonder what chance there is of securing a moratorium, if the moratorium is directed primarily at Japan and the U.S.S.R.? If the moratorium is designed to establish cooperation, you have to have cooperation to secure a moratorium. So you are chasing your own tail, I would think.

Mr. McVay. It is difficult to judge the impact of this resolution. One can recall, for example, during the 6-month period of intensive review by the Department of Interior on endangered species, it was said the unilateral action by the United States would have a deleterious effect on the Commission. That did not turn out to be the case. It strengthened the U.S. impact on the Commission last June. I think in the same way a recommended moratorium would have a very strong impact on the Commission.

It would not necessarily mean that the whalers would accept a moratorium right away, but it could work to reduce quotas, for example, to make the observer scheme operative, eliminate the blue whale unit, which apparently is going to be shelved next year.

Mr. Frelinghuysen. Mr. Blow, you described the moratorium as a drastic step. What is so drastic about it?

Mr. Blow. The complete cessation of whaling would certainly be drastic when there are many millions of dollars invested in the whaling industry in Japan and the U.S.S.R., of course a lesser amount in other countries. I think it would be a drastic step to ask these countries to, in effect, commit economic suicide so far as whaling is concerned.

Mr. Frelinghuysen. You mean drastic in a sense that it would be unrealistic to specific countries to comply with our suggestion that there be a moratorium?

Mr. Blow. That is one aspect of it; yes.

Mr. Frelinghuysen. So your proposal, and I gather Dr. McHugh's also, is to pursue something less than a moratorium, such as lower quotas and elimination of the blue whale unit, and so on? I still don't understand why there is such persistence to a concept such as the blue whale unit, if it is being used the way it is? Why isn't it generally recognized that there should be a modification of that approach?

Mr. Blow. It has been recognized and it has been agreed that it will be removed next year.

Mr. Frelinghuysen. So that all countries are now willing to recognize that that is going to be eliminated?

Mr. Blow. That was our general understanding.

Mr. Frelinghuysen. What is the status of the international observers? That again, as I understand it, is one of the problems which has plagued meaningful enforcement of present regulations.

Mr. Blow. The Commission has tried, at least certain countries in the Commission have tried, for a good many years to put such a scheme in effect. At the recent meeting, it was agreed that such a scheme should be put into effect before the 1971–72 Antarctic season. This would be on a regional basis. There would be agreements or schemes for the North Pacific, for the Antarctic factory ship operations, for the Southern Hemisphere land stations, and for the North Atlantic.

At least three of these agreements are available in draft. We met immediately after the meeting of the Commission and prepared drafts. They are now being considered by the governments. I don't know what progress has been made by the Southern Hemisphere land station countries: Australia and South Africa. I don't know what progress has been made in the North Atlantic region.

Mr. Frelinghuysen. In your view, this kind of approach will provide the kind of teeth that has been lacking?

Mr. Blow. We are optimistic, Mr. Frelinghuysen.

Mr. FRELINGHUYSEN. Mr. McVay talked about the probability that the Soviets might not be insensitive to this problem, because they have prohibited the killing of porpoises and dolphins, as I recall. What is the difference between protection of those species and the protection of whales? Are those more valuable or less valuable? Are they more endangered or less endangered?

Mr. MCVAY. The Soviets have a very substantial stake in the whales while in the case of the dolphins and porpoises, there was only a small fishery in the Black Sea. When the propoises and dolphins, ceased to exist in any number, the ban was instituted. The analogy is stretched a bit but nonetheless significant.

Mr. FRELINGHUYSEN. We should not take much comfort from the move?

Mr. MCVAY. No; but it should be recognized. Of greater substance, however, was the action following the recent IWC meeting when the Soviets and the Japanese agreed to observers on factory ships during the next whaling season in the Antarctic. I think this is the most solid accomplishment to date, if it actually comes to pass. The Soviets and the Japanese, and probably the United States and Norway, will be meeting in September in Tokyo to sign regional observer agreements if they are approved.

We have some reason to believe that the Soviets may be serious. However, the observer scheme has been approved in the past, in 1963, and reaffirmed every couple of years, and never been implemented. But I think we are closer now to implementation. This would be a very important forward step, if it comes to pass.

Mr. FRELINGHUYSEN. I don't have any further questions.

Mr. FRASER. Mr. Fascell?

Mr. FASCELL. I am somewhat at a loss with respect to the present ban on importation and also what that means in terms of the whales. You struck a chord when you talked about the Russians and porpoises. How many species of whales are we talking about in the world?

Mr. MCVAY. There are nearly a hundred species of whales overall, of which about 55 are dolphins and porpoises.

Mr. FASCELL. The Russians have nothing to do with dolphins and porpoises because they don't make any money off that; is that right? That is the reason they banned it. They said they had a high brain. The fact is that the dolphins and the porpoises are a big dollar item for the United States; are they not?

Mr. MCVAY. No.

Mr. FASCELL. They are not?

Mr. MCVAY. No.

Mr. FASCELL. We don't use dolphin meat or porpoise meat?

Mr. MCVAY. No.

STATEMENT OF CHRISTINE STEVENS, SECRETARY, SOCIETY FOR ANIMAL PROTECTIVE LEGISLATION

Mrs. STEVENS. Could I just say that Florida has passed a law——

Mr. FRASER. Could you identify yourself please?

Mrs. STEVENS. Christine Stevens. I thought you would be particularly interested to know that the State of Florida, like the Russians, prohibits the killing of porpoises and dolphins absolutely. The law

also prohibits any capture of them unless you show exactly where and how those animals are going to be kept. That is one of the best things that any State has done.

I do think, if I could also give this book to the committee, "The Dolphin: Cousin to Man," it tells about the reason why porpoises are not being killed by the Russians. I don't believe the reason is purely economic. Of course, economic considerations help; but there is a very basic and important thing here that—I am sorry, Mr. Chairman, may I say a word or two more?

Mr. FRASER. Certainly.

Mrs. STEVENS (continuing). That has not been brought up. That is why I would very much like to get it in the record. We have been talking here at this hearing almost entirely about whales as a resource for food and oil. Admittedly that is important, and it is essential that we do discuss it. But more importantly, the moratorium would cause the whales to recover; it can't do anything else. Because, what else are they going to do but increase and multiply if they are not killed?

During that time scientific studies could be made that have never been done because there is constant competiton between all the whaling nations regardless of how much the whale stocks decline. Dr. Small has spoken of the goose that lays the golden egg, and already five geese have been killed, five species of whales are gone, as far as commercial exploitation is concerned. What is more, they are almost gone as far as scientific studies are concerned.

What I wanted to point out is that the Navy has done an excellent job, but not nearly enough, in studying dolphins. There is a much more important reason for us to conserve whales than to eat them if we get that hungry, and that is that they know how to live in the ocean and we don't. They are mammals, and we are mammals. If we get rid of them all, we will never know how to do it.

The fewer species that are left, the smaller our ability to learn from them becomes. All scientists know that. The wider variation you have of a special type, the more opportunity you are given to learn what you need to know. We know we are going to have to go into the ocean. Already the dolphins—I have put in my testimony several examples in newspaper accounts—are teaching the Navy scientists things that are simply incredible.

You can't believe what these dolphins will do, nor can you believe how cooperative they are. That is why it is very shocking to me to hear about the tuna industry being, for some reason, unable to save dolphins who lead them to the tuna. The ancient Greeks were able to do that. Not only did they give the porpoises their share of the fish, the porpoises and dolphins waited around afterward and were given bread soaked in wine. That is a very nice thought, I think.

Mr. FASCELL. Drunk dolphins?

Mrs. STEVENS. I think it is time we took a point of view about these animals that appreciates them as something more than meat. Their meat is very poor.

Mr. FASCELL. I appreciate those comments, and I just wanted to get clear in my own mind what we are importing into the United States. If I could get back to that for a second, it would help me understand the economic politics of the whole whaling industry. That is what I am struggling with and have been doing now for an hour.

I am sorry. Maybe I am a little dense, but can we start over again

and somebody tell me, whether it is Commerce or State or the IWC that bans imports? Are all whale products banned for importation in the United States or are there exceptions?

Mr. BOHLEN. There are only eight species, seven of which you see on the wall behind you, which are on the endangered species list. All other species may be imported.

Mr. FASCELL. They are on the endangered species list? Does that mean that products of those whales or the whales themselves are banned from importation into the United States?

Mr. BOHLEN. Right. Any other species that is not on that list may be imported freely.

Mr. FASCELL. That leaves 92 species that can then be imported freely?

Mr. BOHLEN. But very few of those are commercially exploited at the moment.

Mr. FASCELL. Very few of them are being exploited?

Mr. BOHLEN. Are being commercially exploited in any significant amount. Japan, for instance, does——

Mr. FASCELL. Let us talk about the United States. We will worry about the Japanese—no, we won't because they will keep doing it as long as they can make a dollar.

That is unfair. I take that back.

Mr. FRELINGHUYSEN. It is not that you don't mean it?

Mr. FASCELL. Subject to scientific correction. You can supply this for the record, because I don't want to take up any more of the subcommittee's time with my trying to understand the economic politics of the marine situation. But I would like to know what are the uses for the 92 other species that are not banned for importation. Are we using, for example, whale meat for pet food, and, if so, how much and where does it come from—dolphins, porpoises, and so forth? How big a deal is it?

Mr. BOHLEN. To the best of my knowledge, no other species of whale is imported in this country in any quantity.

Mr. FASCELL. If anybody says to the contrary, they are mistaken? Professor Ray wants to say something.

Mr. RAY. One exception: porpoises for exhibition are brought in.

Mr. FRASER. Do we have someone else?

STATEMENT OF LEWIS REGENSTEIN, WASHINGTON COORDINATOR, COMMITTEE FOR HUMANE LEGISLATION

Mr. REGENSTEIN. My name is Lewis Regenstein. I am with the Committee for Humane Legislation. I submitted testimony which addresses itself to this problem.

First of all, no one knows really how many varieties of whale are continuing to be imported into the country. If you examine a can of cat food, for example, the contents will say, "from natural animal products." It could be from a blue whale, porpoise, from any kind of whale. The fact that we have put only eight on the endangered list does indicate, contrary to the Under Secretary of the Interior's previous statement, that we have not banned whale products from importation into this country. Ninety percent of the whales can still be killed and imported into the country, and are being so.

Professor Kenneth Norris, who is director of the Oceanic Institute in Hawaii, said recently, about 2 weeks ago, that soon dolphins and porpoises would face the same extinction as larger whales, because they make a very good substitute for whale meat in dog and cat food, for example.

I think if the United States would institute an immediate ban on the importation of all whale products into this country, it would give some teeth to the resolution we are discussing and would make this appear much less to be a meaningless hypocritical gesture.

Mr. RAY. Would you document that statement by Norris?

Mr. REGENSTEIN. I would refer you to Dr. Norris, who is an acknowledged expert on the subject. I don't pretend to be an expert myself.

Mr. RAY. What Dr. Norris actually means—and he is on our Marine Mammal Council—is that many porpoises and many whales would be faced with a similar problem to the other species. But there are virtually none that are imported into the United States at this time. He was just alerting people to the problem, which I think is very true.

Mr. FASCELL. You mean the problem that there might be substitution?

Mr. RAY. The problem is that there are literally millions of porpoises in the ocean. People are starting to catch them now. The porpoises are going to be under the same gun as the whales are very soon. It has not happened yet, but the annual catch per year now is estimated at a half million. There is not much effort employed in that.

Mr. REGENSTEIN. I would like to get it straight whether he used the word "endangered" or "extinction." In the New York Times of June 22, 1971, and Washington Post of April 8, 1971, "extinction" is used, not "endangered."

(The articles referred to follow:)

[Reprint of article from New York Times, June 22, 1971]

EXTINCTION CALLED PERIL TO PORPOISES

LOS ANGELES, (AP)—The same threat of extinction that faces the whales now also endangers porpoises, says Kenneth Norris, professor of natural history at the University of California at Los Angeles.

Professor Norris said Japanese fishermen were using huge nets to catch whole schools of porpoises at once. He fears, too, that American and other fishermen may soon get into the business of catching the sea mammals.

"Until recently the United States was the consumer of about a third of all whale products, mostly as pet food," he said. "Now that this has been banned in the U.S. I'm afraid that the cat and dog food manufacturers will turn to the porpoises as a substitute for the whales."

Professor Norris, who is director of the Oceanic Institute at the Makapuu Ocean Center in Hawaii as well, said there are about 70 species of the small-toothed whales that are called porpoises. Some of them, the killer and pilot whales, for example, are called whales but are species of porpoises.

[Reprint of article from Washington Post, Aug. 8, 1971]

PET FOOD USE POSES THREAT TO PORPOISES

LOS ANGELES, April 17 (UPI)—Porpoises, the good luck symbol of sailors for centuries, may face extinction because they make good dog food.

Kenneth Norris, professor of natural history at UCLA and director of the Oceanic Institute at the Makapuu Ocean Center in Hawaii, said Friday that porpoises may be used as a substitute for whale meat in cat and dog foods.

"Until recently the United States was the consumer of about a third of all whale products, mostly as pet food," Norris said. "Now that this has been banned * * * I'm afraid that the cat and dog food manufacturers will turn to the porpoises as a substitute for the whales."

Mr. FRASER. To finish up that one point, would a half-million take a year be more than the annual production?

Mr. RAY. No one has the foggiest idea. Presumably not at the present time. Again, this is a very easy animal to catch. It has a schooling behavior. It is easy to follow. Once you put a purse seine around them they don't jump over the net. To make an animal economically extinct, as I think you brought out, is quite different from making them extinct. I don't think the porpoises or the whales are in danger of extinction per se biologically, but economic extinction is a very real danger.

I think this is the point that Kenneth Norris was involved in trying to impress people with.

Mr. FASCELL. I have one final question. I would like to know, if the United States is going to close down its whale fisheries and otherwise not engage in commercial whaling, how it will have any effect on anything or do anything in terms of either the Whaling Commission or international agreements or anything else?

Mr. MCHUGH. Are you asking me to answer?

Mr. FASCELL. Anybody who can answer.

Mr. MCHUGH. I think it is very clear that the United States can't really have much effect unilaterally unless it uses other pressure mechanisms to get its way.

Mr. FASCELL. It seems to me the only pressure mechanism we had was the fact we were in the whaling industry and we would out compete them, we would be more competitive. If you use enough of the resource, it seems to me you have a better chance getting an agreement with somebody. I don't know.

Mr. MCHUGH. Our industry has been a very small one indeed since the——

Mr. FASCELL. In other words, my logic is wrong; is that it? In other words, it is not a question of the competition for the resource that persuades the other individuals who are also using the resource that there ought to be something done about its conservation; the best way to get them to agree to conserve is for us to quit using it and they will agree?

Mr. MCHUGH. The problem is that these people have capital invested in factory ships and whalers and they will keep on earning a return on that capital as long as they are allowed to do so. This is what we have been struggling with in the Whaling Commission right along.

Mr. FASCELL. I think this is clear. I am anxious to take appropriate conservation measures, but I don't see how with the gentle art of persuasion it is going to be done.

Mr. SMALL. I sympathize and agree to a certain extent. We must try. I will also say this. If history repeats itself in the future with the remaining species which are being commercially exploited, they will go the way of all the rest. When that happens, I would like to know that this country stood up and said, "We damn well don't like it and we don't want to participate."

I don't want to participate in that crime. I would like to raise a hand now and try to stop it.

Mr. McHugh. We said that loud and clear in the Whaling Commission meeting this year several times.

Mr. Fascell. It seems to me, Mr. Bingham has given us a reasonable way out in terms of departmental support, in terms of a resolution that does not commit the administration as such but expresses the opinion of the Congress. I know that Dr. McHugh objects, but it is not binding on you, it is not binding on the administration. It is an expression of the opinion of Congress. It might be a helpful way to do it.

Mr. Ray. I just want to make one point. Did you mention that the International Whaling Commission has a Japanese chairman for next year?

Mr. Small. No; I was in error.

Mr. Ray. Here he is.

Mr. Small. No; I was in error. I just got the document.

Mr. Ray. For the record, will you accept him?

Mr. Small. Yes.

Mr. Fraser. Mr. Bingham?

Mr. Bingham. I have no further questions, but I would like to pursue this point that has been raised. I think the passage of a resolution showing that the Congress is so disturbed about this problem as to call for a total moratorium for 10 years would help you do the job that you want to do. I don't see any reason why it would interfere with any of the specifics that you have in mind, Dr. Ray. It is clearly not going to interfere with the scientific research or anything else. I think you can use it and I think you can use it helpfully.

Mr. Ray. I would like to answer that. There is a great deal of difference, in my opinion, between a positive and negative approach to anything. I would like to see it, if it is a form of resolution perhaps "concurrent" is better than "joint." Perhaps something could be added, anything, to give it a positive approach rather than a protectionist or negative approach.

There is a psychological difference, I think, of immense value.

Mr. Bingham. I think there are paragraphs in the resolution in the "whereas" clauses that do suggest some of the positive values that you have in mind.

I have nothing further, Mr. Chairman.

Mr. Fraser. I am sure the subcommittee would welcome any suggestions——

Mr. Bingham. May I point out, for example, on the first page of my resolution the last sentence reads: "Whereas, much remains to be learned about these unique creatures through scientific study of their behavior," and so on. And with regard to Dr. Chapman's point, the resolution also says: "Whereas, whales form a resource which may prove of importance to mankind in the future if their numbers are not decimated now."

Those are constructive thoughts.

Mr. Ray. The whereases are constructive, but the resolve——

Mr. McVay. Earlier Carlton Ray spoke about the necessity for research on whales. The fact is that in the past 10 years very, very few of the whales that were taken were studied in any way scientifically. Some of the catch data was used to estimate population and

sustainable yield, and so forth, but very little was really used for scientific studies.

I think that there is a necessity for data sampling from dead whales in the future. There also should be an emphasis on the study of live whales now that we have the technology. This was stressed at the recent International Conference on the Biology of Whales. I think that one of the positive results of a moratorium would be to reorient scientists toward the study of live whales. The technology now gives us a remarkable opportunity.

Mr. BINGHAM. I have nothing further.

Mr. FRASER. Let me make sure of my understanding of one matter, Mr. Bohlen. We have banned importation of products with respect to eight species. Do those include the three that are now being commercially exploited?

Mr. BOHLEN. Yes, sir.

Mr. FRASER. So that in practical terms an extension of a ban wouldn't have any effect, because it would only apply to species that were not being sought?

Mr. BOHLEN. Yes; the minke whale is commercially exploited, but I don't believe that much of it is being imported into this country. On the question of dolphins, I would like to add one point. Whereas I sympathize with Dr. Ray's concern for the tuna fishermen, I don't consider their handling of porpoises to be particularly good management. I have heard that up to a hundred thousand a year are killed by the tuna fishermen, killed and thrown overboard. These are not utilized in any fashion, even for research. If they were economically usable in cat food or in any other use, these fishermen would use them for that. This leads me to believe that there probably is not much in the way of porpoise meat being imported for cat food at the moment.

Mr. RAY. I think you should mention, however, that NOAA, in the form of Mr. Bill Parrin, is studying this problem and they are trying to find ways of letting them out. I agree that the tuna fishermen may consider this a giant pain in the neck, but they are devising nets which are acoustically invisible or visible, so that the porpoises will be able to be released. They are working very hard on this, hopefully. The picture does not look very bright.

STATEMENT OF TOM GARRETT, WILDLIFE CONSULTANT FOR FRIENDS OF THE EARTH

Mr. GARRETT. You mentioned the figure of 100,000 porpoises being killed. I think Dr. Norris gave the figure of 250,000 in the Eastern Pacific alone recently.

Mr. FRASER. In connection with tuna fishing?

Mr. GARRETT. In connection with purse seining of tuna. That was the estimate given at the recent conference in Virginia. Additionally, the Japanese have maintained a porpoise fishery and dolphin fishery around the main islands that is estimated to have taken 200,000 animals last year. This is deliberate rather than incidental to purse seining. I think the Eastern Pacific is probably the area where the greatest mortality incidental to purse seining occurs. That loss is mostly porpoises, whereas the Japanese deliberately about their home island take mainly dolphins.

Mr. FRASER. The Japanese are deliberately taking dolphins?

Mr. GARRETT. They are maintaining a large fishery around the home islands and also a fishery around Okinawa.

Mr. FRASER. What do they use dolphins for?

Mr. GARRETT. Primarily meat, pet food, oil, and so on. There are a lot of shops in Japan that sell whale meat. I am sure they sell some dolphin meat in these. Pilot whales are quite commonly taken. There is also a pilot whale fishery, or has been, off Nova Scotia. The stocks became so depleted it finally ran down. They took as many as 10,000 a year in the middle and late 1950's.

Mr. FRASER. There is one last point on which I would like to get more testimony in the record. That is the question of enforcement of whatever is agreed upon. There has been reference already to the understanding that will be consummated to put international observers on whaling ships.

Mr. MCHUGH. We hope it will be consummated, Mr. Chairman, yes.

Mr. FRASER. There was reference earlier to the fact that this has been agreed upon from time to time for the last 8 years. What conclusions can be drawn from that?

Mr. MCHUGH. We judge from the extensive nature of the discussions this year, we talked off and on for 3 weeks solid about this, and the fact that we now have draft agreements and at least an indication by the important nations: Japan and the Soviet Union, that they are both very sincere and very anxious to put this into effect. But until it is in effect, we can never be sure of course.

Mr. FRASER. In whaling is it always possible to know what species you are about to harpoon?

Mr. MCHUGH. Yes; they can identify the species in the water.

Mr. FRASER. That is no problem?

Mr. MCHUGH. No great problem, although I guess in bad weather it might be a little difficult.

Mr. FRASER. There was reference to some pirate operations and to some operations out of Chile, which is not a signatory. Maybe we ought to have in the record what nations are involved in whaling or lending their flag to whaling operations who are not parties to this convention.

Mr. MCHUGH. Chile, Peru.

Mr. BLOW. Portugal, Spain.

Mr. MCHUGH. Brazil.

Mr. MCVAY. With regard to that pirate operation in South Africa, essentially it involves some Norwegian officers and people hired on the boats in South Africa. Many of the whale products go to England, and both England and Norway seem unable or unwilling to do anything about it.

Mr. FRASER. When you say somebody is pirating, what do you mean by that?

Mr. MCVAY. Operating outside of the International Whaling Commission, not under the flag of a member nation. For example, the whaling vessel could fly a Moravian flag or Panamanian flag.

Mr. FRASER. They carry the flag of some nation outside the Convention?

Mr. MCVAY. Right.

Mr. McHugh. It is a mistake to call it pirate, and in that sense you would have to call the Chilean operation pirate.

Mr. Ray. They will kill anything, any size.

Mr. Fraser. How serious an erosion to international enforcement do these operations present?

Mr. McVay. The most serious is Peru. It is the No. 3 whaling country in the world. Peru took 6 percent of the world catch 2 years ago, and 5 percent last year. We have reports that Peruvians are now out of whaling entirely, but we have not been able to corroborate that yet.

Mr. Fraser. You have identified Peru. Other nations have also been identified and then there are operations that borrow some nation's flag. In the aggregate, how serious are these nonregulated activities in attempting to enforce the quotas or the bans?

Mr. McVay. I think they are minimal compared to the whaling that goes on under the Commission's jurisdiction.

Mr. McHugh. The recent developments could be quite serious. The main problem is that we don't know. I think the reason that the people call them pirate is that it is very much suspected they are taking illegal whales, undersized whales, and probably taking prohibited whales, too, although we don't know. There is concern about it.

Mr. Blow. You are referring only to the ships, not to the land stations?

Mr. McHugh. Right.

Mr. Fraser. Why do you make that distinction?

Mr. Blow. Because the land stations in Chile and Peru have been operating, we understand, in general accordance with the Whaling Commission regulations. These stations, Peru for instance has taken mostly sperm whales, about which there is less concern than some of the other species.

Mr. Fraser. Even though they are not parties to the Convention, they are following the regulations?

Mr. Blow. In general. It is our understanding they are.

Mr. Fraser. Are there other land stations?

Mr. Blow. Yes; there are land stations in Spain. In 1970 they took in Spain, 261 sperm whales and 152 unspecified species of baleen whales. In Portugal in the Azores, in Maderia there is a small operation. They took in 1970, 249 sperm whales.

Mr. Fraser. Are these stations monitored in some fashion or do they make reports?

Mr. Blow. Not to the International Whaling Commission.

Mr. Fraser. How do you have this information?

Mr. Blow. I am sorry. They do report the statistics to the Bureau of International Whaling Statistics in Norway.

Mr. Fraser. Are they required to?

Mr. Blow. They are not required to. I don't see how they could be.

Mr. Fraser. But these stations generally do?

Mr. Blow. Yes; perhaps Dr. Chapman can help me out with this. Do you know the procedure through which this occurs?

Mr. Chapman. It is a sort of voluntary agreement. The International Council for the Exploration of the Sea, which was the one that originally started catch data, has urged all countries to participate. It is voluntary participation.

Mr. McHugh. Also through the initiative of the Bureau of International Whaling Statistics. They communicate with these countries and ask them for records of their kills.

Mr. Fraser. So far as you know, do all the stations comply that exist around the world?

Mr. Blow. Comply with the size limits and that kind of thing?

Mr. Fraser. In making these reports.

Mr. Blow. To the best of my knowledge; yes.

Mr. Fraser. There aren't any that are operating that are not making reports?

Mr. Blow. So far as I know, there are not any such land stations that do not report catch statistics. But these small ships which we have spoken about probably do not comply, and they do not report any catch statistics to the International Bureau.

Mr. Fraser. Is the land station one where the processing takes place at that point?

Mr. Blow. On land, and the boats operate from shore so their radius of operation is limited.

Mr. Fraser. The other kind we are talking about are ships that have the processing capability on board?

Mr. McVay. Right. That is when a factory ship goes out an there will be eight or 10 or 12 catcher boats that kill the whales and tow them back where they are winched up on the deck of the factory ship and flensed down. That kind of operation has been going on since 1925; the first ships went down in the Antarctic in 1906. Initially, the whalers stripped the blubber off the whale alongside of the ship and threw the carcass away; later the open shipway was developed, and the whales were pulled right up on deck.

Mr. Fraser. Is there any effort being made to bring these ships under some kind of international control?

Mr. McHugh. Yes. You mean the new ones?

Mr. Fraser. The ships that are operating under flags which are not signatory to the Convention.

Mr. McHugh. The Commission has asked the Secretariat to contact the countries in which they are based and asked them to adhere to the regulations.

Mr. Fraser. But you are not seeking to get the nations to become signatory?

Mr. McHugh. I would think we would like them to become members.

Mr. Fraser. Has any effort been made in that direction?

Mr. McHugh. I don't know.

Mr. Fraser. Do you know, Mr. Blow?

Mr. Blow. No, sir; I don't. However, some of the countries with some influence in this respect have indicated that they plan to take some action. Just what this action might consist of, I am not sure.

Mr. Fraser. Why aren't we more actively involved in that question?

Mr. Blow. I have had trouble identifying these ships. They have been variously described as being under various flags. I am not sure of their identity.

Mr. Fraser. Does anybody know?

Mr. McVay. Information with regard to this particular operation off South Africa came from Peter Best, who is a scientist based down

there, and from Dr. Jonsgard of Norway. Each of them knew part of the story. To the best of my knowledge, the only action being considered by the Commission is perhaps to inquire into the situation and possibly write a letter.

Mr. FRASER. I obviously am not competent to make a judgment here, but it would seem to me as restrictions grow that there will be increasing incentive for people to operate outside of them, and that, while the illegal operations may not be very large now, this would be a good time to try to bring them under some kind of international control.

Mr. BLOW. If we can get more information about these operations—which, by the way, are pretty small, a kind of catcher boat combined with a factory ship, which means they cannot process very many whales. That is my understanding.

Is that correct?

Mr. MCHUGH. I think that is right.

Mr. BLOW. Once we get further information and some definite identification of the vessel and its flag, the flag under which it is operating, I think we would want to consider making some approach to the country concerned.

Mr. GARRETT. One of the operations is under the Liberian flag; the Ascension Co., out of Monrovia, Liberia. The other one, Run Fishing Co., Ltd., has been operating 3 years out of Nassau, the Bahamas, active along the coast of Sierra Leone.

Mr. MCVAY. That is just hearsay information.

Mr. GARRETT. That is what appeared in a paper presented by Dr. Vangstein of the Bureau of International Whaling Statistics.

Mr. RAY. These fellows change their flags around. You pin them down and send a letter to the country. You find he is not there any more, he has a new address. The amazing part of it, the thing that really stunned the people who started to look into this at first, is that these are Norwegian. For a Norwegian to take an undersized whale is like an Indian doing strip mining. He does not do that kind of thing. He really doesn't.

This is a Norwegian operation, as Mr. McVay said. As to the gentleman in South Africa who has his finger on this. I have got between the lines he will try to pin it down as much as he can and pass the information on to urge them to become members of the Commission, or at least to adhere.

Mr. FRASER. To what extent is it believed that there may be infractions now by signatories that have led to this request?

Mr. MCHUGH. There is a good deal of indirect evidence that there are infractions. The Whaling Commission has a subcommittee of its technical committee which looks into the infractions every year, and the member nations are supposed to report their infractions. There is some evidence they are not all reported. This is another reason why we want the international observer scheme, to keep these people on it.

Mr. MCVAY. Last August when my wife and I were in Japan we visited a whaling station at Ayukawa. They had had a very bad season. The day we arrived, they had the largest catch of the year. There were 48 whales brought in. They were distributed among three stations. Of the 26 that were towed to the station where we were,

for flensing early in the morning, the first three to be measured were all undersize, under the legal limit for sperm whales, which is 35 feet. This regulation is to protect immature female sperm whales. I could not give an accurate count as to how many were actually undersized.

However, I would make a rough estimate that of the whales that were taken I would say at least half were immature or undersize, under the legal limit of the Commission. The fellow who was doing the measuring, it was a very casual affair, measured only the first few. He did not seem to bother after that.

I asked him, "What is the size of that whale?"

Then he asked me: "10 meters?" He added, upon reflection, "I guess it is only 9". In any event, the whale was under 30 feet, far below the legal limit. I was told later that the entire school of whales had been captured as is their practice.

I got the story two times independently from people in the Japanese whaling industry that photographs had been taken in the Antarctic of the Russians in 1967 and 1968 taking blue and humpback whales, protected species since 1965. The last couple of years the Soviets threw up a smoke screen so that the Japanese could not photograph the whales they were pulling up on deck.

I would stress that the foregoing is unconfirmed hearsay information, yet that is why this breakthrough, if it does turn out to be one, in terms of the observer scheme is terribly important. We will then know for sure that protected whales are not being taken, and that other regulations in regard to minimum size and so forth are being respected.

Mr. FRASER. Who will be the observers?

Mr. BLOW. They will come from other member countries. For example, in the North Pacific, where we found it necessary, since the Soviet Union has no land stations—Japan does—we found it necessary to draft two separate agreements. Now in the factory ship expeditions, Japanese observers will observe on board Soviet ships, and Soviet observers will be on board Japanese ships. A similar scheme in the Antarctic. Norway and Japan and the U.S.S.R. are involved, assuming Norway operates in the Antarctic this coming season.

So that the observers would come from other member countries. It would not be a corps of observers recruited from nonmembers of the Commission.

Mr. MCVAY. It would be more desirable to have observers drawn from nonwhaling countries, and a good mix. But this at least is a beginning, if it actually does happen this coming year. There is sufficient skepticism between the Japanese and the Russians that the exchange of observers might work out as a good beginning. We might hope a year from now to have a more international mix of observers, and this cooperative effort may evolve into a universal scheme rather than five schemes as of now.

Mr. SMALL. I would like to make a comment here on observations, the number of times the word "if" has been used in reference to hoped-for achievement next year. I am rather pessimistic. I hope I am wrong. For example, for many years the Soviets have agreed that such a plan of international inspections is very much worthwhile. At the last minute, when it is about to be put in operation, they find some excuse.

I don't know what is going to happen. I am very dubious. I will be very happy when the day comes that there are on those ships

really effective, honest inspectors. I do know, for example, that very often on the Japanese ships the post of an inspector is a rather exalted one, not an ordinary seaman doing it.

It is a post of honor. I have talked with whalers who have stated quite bluntly that on Japanese ships the inspectors do not go out on the flensing deck—which stinks to high heaven, and there is blood up to their ankles. An ordinary seaman does the measuring, and he is not going to measure accurately when he spots an undersized whale.

I am dubious it will work. It seems to me, putting Russian inspectors on Japanese ships and vice versa, I won't say what it reminds me of. I think it is hypocritical. I hope I am wrong. I also hope I am wrong in doubting when these gentlemen express the statement that next year they are going to abandon the blue whale unit.

The Japanese whaling industry has stated bluntly on numerous occasions it is biologically quite worthwhile, but it is unacceptable. Maybe they are going to do it. Also the fact that next year, they stated, they are going to reduce the quotas below the optimum levels.

If you go through the records of the International Whaling Commission almost since the year 1949 you can find exactly similar statements; next year we are going to do this; next year we are going to cut it down. It has never happened that the quota has been actually reduced below what they know it should be.

During the coming year, if they have a very bad harvest in the Soviet Union, I think the chairman will be very hard pressed to convince the Soviets to really reduce the quota for the sake of sparing the whale.

Mr. FRASER. Are you saying that a quota never has been set before? Of course they have never had individual species quotas.

Mr. SMALL. No; they never have. In terms of the overall quota, to my knowledge—Mr. McVay can correct me if I am wrong—I know of no instance in which the Scientific Committee said, "OK, the blue whale unit quotas for the Antarctic should be 9,000." I have never known a case when they got it below that.

Mr. MCHUGH. I have to challenge that statement. You are wrong. In 1965, the Whaling Commission entered into a 3-year agreement to get the quota down below the estimate of the sustainable yield in the 3-year period. It did so.

Mr. FRASER. For what species?

Mr. MCHUGH. The blue whale unit quota system in the Antarctic. They got the quota for 3 years below the best estimate at that time.

Mr. FRASER. For the blue whale?

Mr. MCHUGH. No; the blue whale unit quota, which then applied to fin whales and sei whales.

Mr. SMALL. I didn't know that.

Mr. MCVAY. But this year it is set above the sustainable yield for fin and sei whales.

Mr. MCHUGH. This came about through a very complicated set of circumstances and reassessment of the scientific estimates. So this is why I am optimistic that these commitments that were made this year will be honored. They were honored before.

Mr. FRASER. The new scientific judgments, then, left the quota in excess of what it should be?

Mr. McHugh. At that time the Commission and the industry had every reason to believe that they had their quota, the blue whale unit quota, below what it should be and at least stabilized the fishery.

Granted it was too low, but it was stabilized. Then the scientists came up with some estimates and said the stocks were smaller than we realized, their yield was smaller. This was a shock to the Commission and a shock to the industry. Because they thought the quota was where it should be. It has taken them a while to react to this. We have a commitment now that we will eliminate the blue whale unit next year.

Mr. Fraser. In addition to eliminating the blue whale unit, do you have an agreement or tentative agreement on individual quotas for each species that will put it below——

Mr. McHugh. No; only an indication of good will for next year.

Mr. Fraser. If there is going to be an elimination of the blue whale unit, it seems to me that concurrently you need to impose individual species quotas; don't you?

Mr. McHugh. Yes, based on the best scientific evidence at that time.

Mr. Fraser. My familiarity with government leads me to believe that it is a long leadtime before anything happens. You don't wait until you get to the meeting; do you? Don't you go to those meetings really ready to formalize?

Mr. McHugh. No; we argue these points at the meeting. Of course, nothing is certain until you are there.

Mr. Fraser. I am curious as a matter of procedure. If you have only two main countries, why wouldn't there be preliminary exploration of the individual species quota ahead of the meeting, so that you would have some sense of what is likely to happen when you arrive? Is that not done at all?

Mr. McHugh. It has never been done.

Mr. Chapman. One problem is that the data on the previous season—it is a review of the previous catch, usually, that is not available until late May, very shortly previous to the actual meeting, which is held in late June.

Mr. Ray. You were asking before about something positive. It seems to me all sorts of things are coming up here. I am confused a little bit by the position taken by people who are for this moratorium. On the one hand, they say they want a moratorium; on the other hand, there seems to be a general concurrence that they want to go on record with Dr. Small, particularly he does not think it will do much good, but he wants to go on record.

It seems to me that an expression for a moratorium is going to have about as much chance of actual passage—you mentioned the smoke screen in the Antarctic one nation sets up. This is the sort of lack of attention that is paid to just expressions of this sort.

It seems to me if you had all your whereases on this thing, when you get down to the resolve section of the resolution you are talking about you could support the intent that was expressed at the last IWC meeting, support the Commission in its efforts and perhaps make an expression that a prayermeeting be held at the State level to explore, to further explore this intent, to make a further contribution to cooperate, in other words, rather than just put an added burden on those

of us in the United States who would like to see these animals protected. In point of fact, it will have the opposite effect.

Mr. FRASER. What is your view of that, Mr. McVay?

Mr. MCVAY. I think that to the extent that we can, we want to invigorate and strengthen the International Whaling Commission. To come back to your point, originally you asked aren't there meetings in the course of the year to consider quotas, so that when the Commission meets, it can get off to a running start.

This has been part of the problem from the beginning with the International Whaling Commission. The people associated with it have worked strictly on an ad hoc basis. Even those who are most actively involved can only give 10 or 15 percent of their attention to this in the course of a year, if that. So that over the years practically no one has given the problem of whale conservation first-class attention.

Even the small progress which has been made was as a result of many people giving a bit of their time.

Mr. FRASER. Are you talking now about the U.S. part of this, or other countries?

Mr. MCVAY. Overall, that is the problem. The International Whaling Commission has a budget of only $16,000. It is a very small operation. The secretary is a retired man in England.

Mr. MCHUGH. This is really not a pertinent point, Scott. We have argued this before. The budget of the Commission has nothing to do with it. This happens to be the type of commission where the research and management is done by the individual countries. While the Commission's budget might be a little too small, it is not much too small. It will support a small secretariat.

Mr. MCVAY. A substantial budget geared to research would enable the Commission to go out and get people capable of doing the necessary research, but the Commission has been content to take a passive role toward research and then complain about the inadequacies of the scientific data.

Mr. FRASER. I gather the Whaling Commission was originally set up primarily for management purposes, that is, with economic considerations being the principal concern. To maintain the whaling industry and to have some rationale in management.

Mr. MCHUGH. They were given a prominent place in the preamble. Essentially it is not much different from a good many of the other international fishery commissions in which the United States is involved. The words are a little different, the procedure a little different.

Mr. FRASER. Dr. McHugh, are you paid for your work?

Mr. MCHUGH. No; I get my expenses paid, of course, when I travel to meetings.

Mr. FRASER. Do you get a per diem of any kind?

Mr. MCHUGH. Yes.

Mr. FRASER. Just for travel?

Mr. MCHUGH. Just for travel.

Mr. FRASER. Not compensation for time?

Mr. MCHUGH. No.

Mr. FRASER. What do you do in real life, then?

Mr. MCHUGH. I am a university professor. I used to be a Government bureaucrat, but I went back to academia.

Mr. FRASER. Do we have that in the record?

Mr. MCHUGH. I am professor at the State University of New York at Stony Brook. I am presently here in Washington as a fellow of the Woodrow Wilson International Center for Scholars in the Smithsonian Institution. I am here for 2 months.

Mr. FRASER. How long have you been a Commissioner?

Mr. MCHUGH. Five or six years, since Dr. Remington Kellog died. I was appointed when he passed away.

Mr. FRASER. You are one Commissioner, we are entitled to one?

Mr. MCHUGH. Yes, although there is provision also for a Deputy Commissioner. I served in that capacity under Dr. Kellogg.

Mr. FRASER. What kind of staff support do you get?

Mr. MCHUGH. My staff support comes mostly from Mr. Blow in the State Department, but also from Interior and Commerce now, too.

Mr. FRASER. In the State Department, Mr. Blow is the one you work with?

Mr. MCHUGH. Yes. He is my direct contact.

Mr. FRASER. How about Interior?

Mr. MCHUGH. Mr. Bohlen.

Mr. FRASER. And in Commerce?

Mr. MCHUGH. In Commerce I work through Mr. Terry's office.

Mr. BOHLEN. This is the first year that other departments of Government have been involved in working with the Commission and in trying to establish a Federal policy on whales.

Mr. MCHUGH. With one exception, Interior has been involved all along. When I was appointed Commissioner, Mr. Chairman, I was working for the Interior Department. I was deputy director in the Bureau of Commercial Fisheries. I left the Government service last fall.

Mr. FRASER. But have continued as Commissioner?

Mr. MCHUGH. Yes.

Mr. FRASER. Customarily, has the Commissioner been a member of the Government, or outside?

Mr. MCHUGH. A Federal Government employee.

Mr. FRASER. It has been a member of the Government?

Mr. MCHUGH. Has always been a member of the Government.

Mr. FRASER. How do you make your judgment on policy questions? Do you operate under some kind of policy directive generated by the executive branch?

Mr. MCHUGH. Yes, I take my orders from the Secretary of State, through Mr. Blow's office.

Mr. FRASER. The positions you enunciate are those they have cleared in effect?

Mr. MCHUGH. Yes. For instance, in preparing for this year's meetings, we met with all the other agencies: Interior, Commerce, State, and developed our position on that basis, taking into regard the interests of all the agencies that have some responsibilities.

Mr. FRASER. Has a committee been formalized in any fashion?

Mr. MCHUGH. We did it more or less informally. It was done through the State Department. There is another group which has recently been formed through the Council on Environmental Quality. This is chaired by Lee Talbot of that agency.

Just before the Whaling Commission meeting, he called a session of the interested agencies and prepared a memorandum which was

directed to me, giving me some advice in addition to the official U.S. Commission as to how I should conduct myself. I assume from now on this will continue.

Then I get a lot of free advice from conservationists all around the country.

Mr. FRASER. But your actions are those cleared by the Department?

Mr. MCHUGH. Yes. Now, up to recently I had a good deal of flexibility in my position. I have gone to the Whaling Commission meetings, instructed in general terms, but with quite a bit of leeway to make decisions depending on the circumstances. Now this year I had a large delegation. I think there were 16 or 17 people on my delegation, representing these agencies and representing the private interests, too. Scott McVay was on it and a good many others. Carlton Ray was another member. Every time we came up against an issue or had to make a decision, I would hold a delegation meeting, or at least caucus with my delegation, and operate on the consensus, if we were in disagreement in any way.

Another valuable member of our delegation was Gen. Charles Lindbergh, who has a deep interest in whales and has been very helpful to us in a number of ways.

Mr. FRASER. What you indicated, though, is that the Commission itself has no full-time staff?

Mr. MCHUGH. No; its support is provided by the British Government. I don't think any of the members are full time. It is located in London.

Mr. FRASER. What is located in London?

Mr. MCHUGH. The Commission Secretary and his assistant and staff people.

Mr. FRASER. Is the Secretary professional?

Mr. MCHUGH. He is a professional British Government civil servant, who is retired and is doing this as a part-time job. He does not put full time into it, by any means, maybe 10 to 15 percent of his time.

Mr. FRASER. One has the sense—just to get your reaction—that with this kind of new awareness of the problem of the risk of losing species completely or running them down, kind of a new awareness of the problem of ecology, that as an international vehicle this is something that perhaps ought to be strengthened in its capability to maintain research efforts, and so on.

Am I wrong about this?

Mr. MCHUGH. I think it will be in a sense, when the international observer scheme is implemented. Because then it has been agreed it will be operated by the Secretariat. This is the basis of the draft agreements. Then the Secretariat will have to have some full-time capability and their budget will have to be increased for this purpose.

We did discuss this at the last meeting.

Mr. FRASER. Dr. Chapman, how do you get into this? Who appoints you?

Mr. CHAPMAN. As I think I mentioned in passing, the Commissioners, in 1960, urged the Commission to set up a study group. I was asked to chair that study group.

Mr. FRASER. By whom?

Mr. CHAPMAN. By the Commission. Actually, sort of working through our United States——

Mr. McHugh. If I may interrupt you, you were operating as consultant to the Bureau of Commercial Fisheries.

Mr. Chapman. That is right. The other two people who were asked to be members of the study group were Holt of HAO and Allen of New Zealand, who was one of their civil servant people and directed their marine research.

Mr. Fraser. This was in 1960?

Mr. Chapman. After the study group prepared its report in 1963, we were asked to continue in 1964. At that point, I was asked to become an adviser to the U.S. delegation by the State Department and Interior. I went to the 1965 meeting as an adviser.

At that point, the different scientific people, the committee, meets and elects a chairman. I was elected chairman of the Scientific Committee. Since that time, I have been asked to be an adviser by the State Department.

Mr. Fraser. Is this a three-man committee?

Mr. Chapman. The whole committee is a larger group. Each country that wishes to, had one or more scientists in the Scientific Committee.

Mr. Fraser. How large is it now?

Mr. Chapman. It is about 12 or so members.

Mr. Blow. Eight countries

Mr. Fraser. Are you paid for your work?

Mr. Chapman. No.

Mr. Fraser. You get travel expenses?

Mr. Chapman. Yes.

Mr. Fraser. But nothing else?

Mr. Chapman. I serve as a consultant for the National Marine Fisheries during the actual meetings.

Mr. Fraser. What is the nature of the research this group carries on?

Mr. Chapman. As individuals, they can do as I mentioned I do, a little work on analysis of the data prior to the meeting. Mr. Allen, who is now in Canada——

Mr. Fraser. Where does this data come from?

Mr. Chapman. It is all reported to the Bureau of International Whaling Statistics in Norway.

Mr. Fraser. How is that related to this convention?

Mr. McHugh. It was established by the Norwegian whaling industry and by the Norwegian Government back in 1930 at the request of the International Council for the Exploration of the Sea. They have been operating ever since. It is financed entirely with Norwegian funds, although in the last few years the Commission has been given a small amount to cover the extra cost for processing the data that go to the scientific committee.

Mr. Fraser. This data is primarily on catches?

Mr. McHugh. Some effort data, some biological data. So that the Bureau operates in the sense of almost as an arm of the Commission but they really are separately funded. It is a cooperative arrangement. Different groups collect biological data.

Mr. Fraser. When you say different groups generate this kind of data?

Mr. McHugh. The National Institute of Oceanography has a whale study group in Great Britain, and the Japanese Research

Institute has a whale unit in their Far East Fisheries Laboratory. The Norwegians, Canadians, South Africans, and Australians support whale research.

Mr. FRASER. What about the U.S. Government?

Mr. MCHUGH. We support Mr. Rice and I think he has one assistant. They were based in Seattle at the Marine Mammal Biological Laboratory of the Bureau of Commercial Fisheries. They are now stationed at La Jolla in the National Marine Fisheries.

Mr. FRASER. Is his principal responsibility whaling?

Mr. MCHUGH. Almost entirely—he has been working with the analysis data from our catches at the station in California, and also at research on gray whales.

Mr. FRASER. That is what you referred to earlier?

Mr. MCHUGH. Yes.

Mr. FRASER. Do we have anybody whose concern runs beyond that, who sort of worries from a conservation point of view, studying the problem of whales?

Mr. MCHUGH. I spend some time worrying about that myself.

Mr. RAY. That is what this IBP program is supposed to be starting to do. The international biological program which is based in London has a PM section, productivity marine. Under that, there are four themes: marine mammals are considered. I was asked to be program coordinator for this theme. Right now, we are trying to engender some research ideas and we have many proposals on the desk. We are only 3 months old.

Mr. FRASER. Who will fund these proposals, once they are adopted?

Mr. RAY. Well, why don't you pass a bill? We are operating under the National Science Foundation right now, in order to organize some of these research proposals. Anyone can apply to this and we hope eventually that the international biological program, which is going to be over in 1974, will find other ways of support, such as through the SCOPE program and the environmental monitoring, under various environmental worldwide programs.

The problem has been, when you speak of funding, and always has been that when you deal with international resources, there is almost no way of funding a person from another nation out of some international pot. There are certain ways, but you can't support his salary. So it has been a sort of pick and choose thing where one bureau in a country will contribute a little and another will contribute. We are seeking ways to support research. We are a research organization. We are not a management organization.

How the data is used, is another matter. There are a number of ideas, such as putting data bank in various institutions to augment and amplify the data bank that already exists. As I say, we are just starting. We are trying to get an international group together to work out some of these problems.

Mr. FRASER. There was a reference earlier to some new techniques in census taking.

Mr. RAY. There is one, virtually only one that we can think of. There are a number of ways of looking at it. That is the system of telemetry. Satellite telemetry, tracking, counting. There are about eight people in the world now that are developing telemetric instrumentation—I happen to be one of them—for seals.

The most successful have been the Navy people. When you are dealing with an animal like a whale that is a highly acoustic animal itself, there is a real problem of how to get your data back from the package you attach to the animal. Luckily, whales are big animals. You can put big packages on them. You have to hold them down first. One man has succeeded in getting some very remarkable data on the west coast porpoises: where they eat, at what depth they feed, how they follow bottom topography in the ocean.

Mr. FRASER. Is your work in this area funded by the Government?

Mr. Ray. My work in this area is funded by the Office of Naval Research and National Science Foundation dealing with walruses in the Bering Sea. Telemetry is not magic. It is tough stuff. There is one research tool, if it can be ironed out, that is using the animal's own sound for tracking him on earth and getting behavioral correlation to what the animal is doing.

Mr. McVay mentioned song. The whale music he played is very beautiful. It is probable that the animals are singing, reproducing somewhere. No one knows this yet. If you could record an animal and tell how many are there, what they are doing, where they are, then you could use acoustics which travel tens of miles, if not hundreds, through the water to give some indication of animal abundance.

Mr. FRASER. How do we make census estimates now?

Mr. RAY. They are made by the old method of taging an animal and picking up the tag from animals that are killed. That is the main way. The other way is aerial surveys. None of these data are reliable in the least, when you come down to the same sort of thing we might do on land. The estimates for whale populations differ very often by more than a hundred percent from the highest to the lowest, usually more than that.

This is just a very poor data base to go on. It is all we have.

Mr. FRASER. Is the United States generating that kind of information?

Mr. RAY. Some on some animals. I think most of the information generated does not come from us.

Mr. CHAPMAN. It is an analysis of both catch and effort data and tagging. These are the primary tools that have been used.

Mr. FRASER. Are we doing it? I am curious as to who is doing it.

Mr. CHAPMAN. We are doing some of the analysis of the data. I am, and Mr. Allen of Canada, the Japanese scientists. Primarily the analyses of the data have been done by Allen of Canada, some Japanese scientists and myself.

Mr. FRASER. I did not mean to prolong these hearings to such a degree, but some of these questions seemed to suggest themselves by what has been testified to earlier.

Are there any further comments that any of you would like to make in connection with our original interest on whether or not this subcommittee should pass some kind of resolution?

None of you have anything further to say? Let me thank all of you very much for being with us and staying so long. If in the next few days or the next week or so, if any of you should have any further thoughts, observations or suggestions, we would certainly welcome them, either for us individually or to be inserted in the record.

Thank you very much.

(Whereupon, at 5:25 p.m., the subcommittee recessed to reconvene at the call of the Chair.)

STATEMENTS SUBMITTED FOR THE RECORD

REMARKS ON THE FLOOR OF THE HOUSE OF REPRESENTATIVES BY HON. OGDEN R. REID, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEW YORK, AUGUST 3, 1971.

Mr. REID of New York. Mr. Speaker, I rise at this time to introduce legislation calling for a 10-year moratorium on the willful killing of porpoises and dolphins, and to instruct the Secretary of State to encourage the development and implementation of international controls to minimize the incidental killing of porpoises and dolphins in conjunction with the catching of tuna. Some 40% of the world's yellowfin tuna and almost 50% of the world's skipjack tuna are caught in the company of porpoises and dolphins.

There is evidence, according to Dr. Kenneth Norris—a participant in the International Symposium on Cetacean Research and editor of Whales, Dolphins, and Porpoises—with whom I have conferred while preparing this legislation, that these friendly and intelligent mammals are being decimated because of commercial fishing practices, particularly in the eastern inter-tropical Pacific area. The problem is that many commercial fishermen now use highly efficient purse seines (nets) to catch schools of tuna which swim behind and underneath the porpoise schools, perhaps to take advantage of the porpoise's ability to locate bait fish by natural sonar. These seines are 4 to 5 times more efficient than using lines and bait, but they encircle porpoises as well and too many die before they can be released. I have been informed by Dr. Carlton Ray of the Smithsonian Institution that well over 200,000 common dolphin (Delphinus delphis), spinner (Stenella longirostris) and spotter (Stenella graffmani) porpoises die each year in the purse seines of the United States, and when one considers that Japan takes as many tuna, and France over twice as many tuna by the same method as the U.S., the probable figure of porpoise kills per year becomes staggering. There is also considerable evidence that the porpoise schools are becoming smaller than their normal 1,000 animals, according to Fishery Biologist William F. Perrin, who presented a paper to this end to the 6th Annual Conference on Biological Sonar and Diving Mammals.

For reasons we do not understand, porpoises caught in purse seines do not jump out of the nets. The danger arises when tuna boats "back down" to draw in the nets. The porpoises navigate by natural sonar and the proximity of the enfolding nets apparently confuses them. Once encircled, porpoises swim around wildly, and then gather together in a group and sound to the bottom of the nets where many of them drown. Others become so frightened that they go into shock and rigor and also drown. These animals become highly distressed when a fellow-cetacean becomes injured, and will not leave it, which is a possible explanation as to why some porpoises will not jump out of the nets while others are still trapped.

Many marine scientific groups, including the National Oceanographic and Atmospheric Administration, have cooperated in the development of new nets with a smaller mesh for tuna fishing, so that the porpoises do not catch their snouts, as is presently the case. These new nets will be implemented by yellowfin-tuna fleet when the new season gets underway next January 1st, and the boats begin to gather the United State's annual quota of 140,000 tons. The purpose of the international effort I have requested would be to help N.O.A.A. through its component, the National Marine Fisheries Service, to develop and implement nets with two other safety features—an escape hatch, and and an acoustic device in the net to emulate killer-whale calls. The killer whale is a natural enemy of the porpoise, and many scientists, including Dr. Alan Longhurst, Director of the Fishery-Oceanographic Center, N.M.F.S., feel that devices emitting killer-whale calls should be run down lead-lines into the purse seines, thus stimulating porpoises to avoid the nets. In behalf of tuna fishermen, it must be granted that they frequently try *not* to fish on porpoise schools, and, as a rule, do not do so on the traditional fishing grounds, where they look for a "breezing school" of tuna which may hold up to 10,000 fish. Breezing schools of tuna feed just below the water's surface, sweeping through small bait fish so swiftly that the ocean appears to be ruffled by the breeze itself.

The Japanese slaughter annually some 20,000 porpoises for human consumption by driving them out of the water onto land. I fear that without international controls, areas where porpoises are trapped may spread to the Western Pacific, off Samoa, and perhaps to the Indian Ocean and African coasts. Porpoises of the "Flipper" variety (Tursiops truncatus) used to be killed off the coast of Cape Hattaras in order too make high quality lubricating oil, such as that used for watches, but this practice ended some 50 years ago. This oil is now imported from the West Indies, and is a by-product of the pilot whale which is killed there for food. However, should a moratorium on the killing of whales go into effect, as is being considered by the House Foreign Affairs Committee, a new source of lubricating oil must be found and I fear that manufacturers will again turn to killing porpoises to obtain this oil.

There also has been some speculation that since a 10-year moratorium on whales would mean that pet food products containing whale meat could not be imported into or sold in the United States, pet food manufacturers may turn to the harvesting of porpoises to make their products, This does not mean that I oppose a 10-year moratorium on the killing of whales. I support it most strongly, but feel that porpoises and dolphins, which are also members of the cetacean family, should be given equal protection.

Porpoises normally exercise nurturant and succorant behavior similar to human beings, and as Aristotle has stated, "this creature is remarkable for the strength of its parental affection." Females exhibit great care for their young, nursing them until they are about 18 months old, and the mother-young relationship lasts an impressively long time. At around four to six years of age, young dolphins born in captivity have been known to seek out their mothers from the group when they become tired, sleepy or alarmed. A pertinent example of their succorant behavior was recorded by Drs. J.B. Siebenaler and D.K. Caldwell in 1956:

When a charge of dynamite was exploded in the neighborhood of a school of dolphins, one of the school was stunned by the shock. Two adults immediately swam to its assistance and supported the injured animal. When the two assisting dolphins left to breathe, they were relieved by what apparently were different animals. The supporting behavior continued until the injured animal recovered completely, then the entire school left the area. Again it is noteworthy that the school remained intact and stayed in the danger area until the disabled animal had recovered, instead of obeying what must have been a strong impulse to leave the area of the explosion. Such a quick mass departure occurred on another occasion when dynamite was exploded and none of the dolphins was injured.

There are no accurate figures available as to the number of porpoises and dolphins in our oceans; only the knowledge that the schools are becoming smaller and wilder, and that the population structure is changing. This is due to a different sex-ratio, apparently because commercial nets primarily kill older animals, females and calfs, leaving the younger and wilder males in greater proportion than is normal. It is my feeling that until studies now underway on porpoise feeding, mating habits, life expectancies and travel habits are completed, a moratorium is the only way to ensure that disaster does not await the porpoise and dolphin in the future.

THE WASHINGTON ANIMAL RESCUE LEAGUE,
Washington D.C., July 25, 1971.

HON. DONALD FRASER,
Chairman, Subcommittee on International Organizations, House Foreign Affairs Committee, U.S. House of Representatives, Washington, D.C.

SIR: It will be appreciated if the following will be included in the record of hearings held on July 26:

The Washington Animal Rescue League urgently requests that the full support of your committee be given to H.J. Res. 706 to influence its success. The resolution, which requests the Secretary of State to call for a ten year moratorium on the killing of all species of whales, can have a powerful impact throughout the world in encouraging the preservation of whales which have been hunted and killed off at an alarming rate.

Those of us who admire nature's wonderful, irreplaceable gifts to man and who have grave concern that the whale will become extinct, appeal to you and your fellow members of the U.S. House of Representatives to take proper action to encourage the continued existence of these remarkable creatures. Particularly since the world is no longer dependent on any by product of these mammoths of the deep is mankind morally committed to provide for their protection.

MRS. PAUL KIERNAN, *President.*

AMERICAN HORSE PROTECTION ASSOCIATION, INC.,
Great Falls, Va., July 26, 1971.

Hon. DONALD M. FRASER,
Chairman, Subcommittee on International Organizations and Movements, Committee on Foreign Affairs, House of Representatives, Washington, D.C.

MY DEAR MR. FRASER.: The Board of Directors and the members of the American Horse Protection Association strongly support H.J. Resolution 706 which instructs the Secretary of State to call for a ten year moratorium on the killing of all species of whales.

Although our Association is dedicated to the welfare of horses, both wild and domestic, we are firmly opposed to the wanton destruction, motivated by greed, of any animal life which has a God given right to exist.

We request that this letter be made a part of the record of the Committee hearings.

Sincerely yours,

JOAN R. BLUE.

AMERICAN VETERINARY MEDICAL ASSOCIATION,
Chicago, Ill., July 27, 1971.

HON. DONALD K. FRASER,
Chairman, International Organizations and Movements Subcommittee, Committee, on Foreign Affairs, U.S. House of Representatives, Washington, D.C.

MY DEAR MR. FRASER: We wish to take this opportunity to advise you of the interest of the American Veterinary Medical Association in House Joint Resolution 706 and House Concurrent Resolution 375. Veterinarians are concerned that the present level of whaling activity, particularly by Japan and the U.S.S.R., may destroy populations of whales throughout the world. Reducing the number of whales captured for commercial purposes for a period of time would permit them to reproduce and, hopefully, to regain a balance with their natural environments. The American Veterinary Medical Association recommends that every effort be made to develop monitoring systems that would prevent undue exploitation of whales and provide for rational management of this wildlife resource through agreements among the nations involved in whaling. If such agreements, providing for capture of whales in moderate number, can not be developed, a moratorium such as proposed in House Joint Resolution 706 and House Concurrent Resolution 375 should be given serious consideration.

Sincerely,

M. R. CLARKSON, D.V.M.,
Executive Vice President.

STATEMENT OF TOM REISDORPH, VOLUNTEER WORKER, FRIENDS OF THE EARTH, BEFORE THE HOUSE FOREIGN AFFAIRS SUBCOMMITTEE ON INTERNATIONAL GROUPS AND ORGANIZATIONS, JULY 29,1971

Dolphins and Porpoises:

The Japanese have engaged in whaling operations against dolphins in the waters near the home islands for a number of years. In the past several years this predation has greatly increased. 20,000 dolphins were taken in 1967. The 1970 kill was estimated at 200,000.

Dr. William Perrin of the National Marine Fisheries Service describes the operation as follows (personal communication). "There is a large fishery for several species (Stenella coeruleoalba, Delpinus delphis, Tursiops truncatus, Globicephals sp., Phocaenoides dalli, Lissodelphis borealis, and others) which involves mainly harpooning and beach drives." The species listed are all dolphins, including the common and bottle nosed dolphin, and the pilot whale.

Another comparatively large dolphin fishery existed until recently off the east coast of Canada. 10,000 pilot whales were taken in 1956. 47,078 pilot whales were killed off Newfoundland alone between 1951 and 1961. The kill has dropped steadily since 1964, and is now in the low hundreds (Sergeant and Fisher). The collapse of the fishery is explained as resulting from "overexploitation of a local stock", which it is explained, have not "recovered well from this initial exploitation."

The Beluga were formerly killed in the St. Lawrence gulf in considerable numbers, primarly for their hides which are sought after for certain leather products; shot, harpooned, or entangled in heavy nets.

This large delphinid which has a particularly large and convoluted brain (presently being studied by Dr. Jacobs of the Cetacean Brain Research Laboratory at the New York Aquarium) has also been taken commercially in the Hudson Bay and the Davis Strait.

For $250 "sportsmen" are taken out from Churchill in boats, and allowed to harpoon for "fun". This "sport" has been promoted by the Canadian National Railways.

The growing problem of cetacean mortality concomitant to the purse seining technology is discussed in the "digest" of the International Conference on the Biology of Whales. "Recent developments in the American tuna fishery . . . have produced a problem of great economic and biological importance affecting delphinids of the genera *Stenella* and *Delphinus*. Tuna fishermen locate schools of tuna by watching for porpoise and seabird activity. Having sighted a school, they enclose it in a long purse net which not only captures the tuna but also the cetaceans. There is at present no practical method for effectively separating these delphinids from the tuna. As a result, the setting of one tuna net may result in the death of scores or even hundreds of porpoises. Over most of the world, there is no good market for porpoise meat so the dead porpoises are discarded. It has been estimated that in the eastern Pacific alone as many as 250,000 porpoises are wasted annually as a result of this situation. It is obviously only a matter of time until this extremely efficient method of tuna fishing becomes widespread. The resultant wastage of porpoises will represent a major problem in all oceans."

The paper contains the following, to us, sinister, prediction; "The smaller cetaceans, although for the most part not commercially exploited, represents a resource of major potential economic importance . . . in the near future porpoise hunting as an end in itself will become an important enterprise."

Dr. Perrin makes the following comments concerning porpoise mortality relating to the Japanese fishery, and his view of the possibility of commerical exploitation. "There is considerable incidental mortality of porpoise in the Japanese longline fisheries for tuna and billfish and in the North Pacific gillnet fishery for salmon (see K. Muzue and K. Yoshida, 1965, Bull. Faculty Fisheries, Nagasaki Univer., No. 19). Since porpoise are very vulnerable to purse-seining (see N. N. Danielevskiy and V.P. Tytyunnikov, 1968, Rybnoye Khozyaystvo, Nov.: 25–27), and there is a market for them in Japan for human consumption, the potential for such a fishery certainly does exist. Incidental mortality of porpoise (*Stenella* spp.) occurs in the U.S. tropical purse seine fishery, which problem the National Marine Fisheries Service is presently trying to solve, and Japaness tuna purse seiners have recently begun to fish for tuna in the same area as the U.S. seiners. The ease with which porpoise may be captured with purse-seines in the area could conceivably lead the Japanese to consider harvest of them as well as tuna; this I believe, is the eventuality that Kenneth S. Norris was referring to in his talk at the University of California at Riverside. A factor that might prevent a Japanese far-seas porpoise fishery from developing, however, is the economic one of the price differential between porpoise and tuna—$100–$200 per ton for porpoise versus $400–$1,000 for tuna, the exact price in both cases depending on species and season."

We do not have, at the moment, the text of Dr. Norris's Riverside address. The following accounts of Dr. Norris's address appear in the *New York Times* and *Washington Post*. It will be noted that both newspaper stories use the word "extinction" in describing Dr. Norris's story.

"PIRATE" WHALERS

The whaling nations are reducing the great whales, one after another, to "commercial extinction". Only after it has become clear that too few of a given species remain to make it worthwhile to hunt them, has the International Whaling Commission established a prohibition on hunting.

Today, five, species of great whales are close to extinction. The northern and southern Right whales, and the Bowhead whale, were reduced to remnants by by the whalers of the 18th and 19th century. These species, thanks to continued random attrition by whalers, have never made any significant recovery and the prospects for survival of the Right Whales, in particular, are grim indeed.

The Blue whale and the Humpback whale have been destroyed largely in the past two decades, under the "conservation management" of the IWC. The world wide population of the Blue whale is generally estimated to be in the low thousand, occurring in remnant stocks separately widely from each other, continuing to follow traditional migratory patterns.

In 1962 a whaling fleet, operating under a flag of convenience totally annihilated to the last "mother and infant" the largest known remnant of the almost extinct southern right whale, which is nominally protected by the IWC.

This gruesome incident points up a sinister problem, that of so called "pirate" operations who may well destroy the "protected" survivors of the "juggernaut of the major pelagic fleets."

The summary of the International Conference on the Biology of Whales discusses the matter as follows: "There appears to be a danger to certain isolated whale, stocks, which could be destroyed in a very short time. There could be a particular risk from the irresponsible use of existing surplus whaling equipment, especially in countries not party to the International Whaling Commission."

Dr. Vangstein of the Bureau of International Whaling statistics reports comparatively large whaling operations in the Atlantic at the present time. These are listed in his paper as follows:

"A combined catcher/factory ship belonging to Run Fishing Company Ltd., Nassau, Bahama Island, has been active along the coast of Sierra Leone for the last three years.

Another combined catcher/factory ship and a catcher started activities along the coast of South Africia around June/July 1970. This expedition belongs to Ascension Inc., Monrovia. As far as is known this expedition is only catching sperm whales."

These are, of course, by no means the only operations outside the IWC. There are very certainly a number of other smaller "pirate" operations, which are able to acquire equipment at slightly above scrap prices, and pay for it in one or two "hauls" such as that described of Tristan de Cunha.

Chile, Peru and Ecuador have maintained, in the past, a separate regulatory commission known as the Commission of the South Pacific. Last year Peru took nearly 6% of the international whale kill.

Dr. Small, in "The Blue Whale" states that Japanese Whaling interests have taken advantage of the non-membership of certain countries with whaling stations available to circumvent the regulations of the IWC. He reports that negotiations were undertaken through the Japanese government for Japanese whaling fleets to operate under the Chilean flag, and those avoid the prohibition which the IWC applied, finally, in 1965, against killing the last Blue whales.

A paper prepared by Anelia Aguayo of the University of Chile documents Dr. Small's assertion: "For technical and economic reasons the whaling companies of Peru confined their catch to sperm whales until 1964 whilst in Chile whalebone whales were only a small fraction of the catch until 1965."

"The Japanese whaling companies (The Nitto Whaling Co. Ltd.) operated in Chile from October 1964 to March 1968 are what increased significantly the Baleen whales captures in Chile. The annual average Baleen whales catch from 1964 to 1967 is 568 animals; this average for the previous ten years (1954–1963) is only 266 animals." Refer to Table I.

The table as will be noted, list 680 Blue Whales killed between 1964 and 1968, following the advent of the Japanese Whaling Company 578. This occurred after all member nations of IWC had agreed to cease the killing of Blue Whales.

The Olympic Whaling Co., owned—not surprisingly—by Aristotle Onnassis, compiled record of atrocities which is perhaps typical of the whaling industry generally, but particularly typical of so called "pirate" and "flag of convenience" operations. The company's catchers were registered under the Honduran flag, while the factorty ship was registered with Panama, an ostensible member of the IWC, but without the slightest interest in enforcement of its regulations. The following is a summary of the testimony of German nationals employed on the factory vessel, *Olymphic Challenger*, (reinforced by numerous photographs) as compiled by Dr. Small:

(1) During the autumn of 1954 the Panamanian factory ship reported a catch of 2,348 sperm whales off the coast of Peru. The actual catch was 4,648 sperm whales, 285 blue whales, 169 fin whales, 105 humpbacks, and 21 sei whales. Of the blue whales killed, 35 were 59 feet or less in length and 2 were less than 46 feet. It was forbidden to falsify catch reports. Also, it was illegal for factory ships to catch baleen whales between the Antarctic and the Equator.

(2) During the 1954/55 season in the Antarctic the *Olympic Challenger* began hunting baleen whales before the season opened on January 7.

(3) Whales were killed regardless of size. Baby sperm whales were shot before they even had teeth. Some were only 5 meters long and must have been newly born calves (a sperm whale averages 4 meters long at birth). Many young whales were shot, and on occasion 4 at a time were hauled on board by winch. Often

a whale was so small that it was only necessary to remove the harpoon and entrails before the carcass was dropped whole into the cookers.

(4) Five of the German whalingmen swore they never saw a Panamanian inspector on the flensing deck.

TABLE 1—BALEEN WHALES CAPTURED IN CHILE BETWEEN 1929-70 [1]

Year	Blue whales	Fin whales	Sei whales	Humpback whales	Right whales	Total
1929	150	85		23	9	267
1930	97	62		34	1	194
1931	23	1		47		71
1932	29	14		20	22	85
1933	16	44		11	11	82
1934 [1]	?	?		1	15	124
1935	31	42		15	27	115
1936	39	9		14	1	63
1937	18	25	13	16	2	74
1938	15	56	44	6	14	135
1939	2	99	15	7	5	128
1940						
1941						
1942						
1943	2	13			1	16
1944	3	49		3		55
1945	60	64	1	11		13
1946	11	228	13	15		267
1947	24	88	2	17		131
1948	85	289	6	5		385
1949	35	219		6		260
1950	45	274		5		324
1951	77	279	2	3		361
1952	142	423	10	15		590
1953	172	301	27	5		505
1954	70	434	26			530
1955	149	359	33	5	6	552
1956	207	203	47	3		460
1957	100	79	39	5		213
1958	165	74	16			255
1959	80	70	17	4	1	172
1960	131	52	13	2		198
1961	142	16	13	3		174
1962	11	34	9	4		58
1963	31	11	6	1	1	50
1964	112	136	47			295
1965	385	266	487	6	2	1,146
1966	128	84	210	7	1	430
1967	65	7	330			402
1968		24	70			94
1969			81			81
1970			19			19
Total	2,852	4,503	1,596	319	119	9,497

[1] Captures recorded by the Ministry of Agriculture and the University of Chile.

(5) False catch reports were submitted to Sandefjord. During the 1954/55 season the *Olympic Challenger* reported catching 170 humpback whales. In reality it caught 1,125. To hide this the ship reported 700 more fin whales than it had killed. The baleen-whale oil produced illegally off Peru was reported as sperm oil. It was also necessary therefore to falsify the sperm-whale catch in the Antarctic.

(6) By sending in falsified reports on the size of the catch the *Olympic Challenger* caused the 1954–55 season to be declared closed before the 15,500 blue-whale-unit was actually reached. The *Olympic Challenger* continued whaling after the other expeditions headed home and killed an additional 12 blue whales and 13 fin whales.

(7) The *Olympic Challenger* violated the opening and closing dates of the whaling seasons 1950–51 and 1952–53. (Proof of other infractions in these earlier years is lacking.)

International law evidently permits no action against these "pirates", outside territorial waters except by the governments under which the ships are registered.

Legislation aimed at curbing them should probably have to take the form of a resolution instructing the State Department conduct negotiations with various nations having such fleets registered aimed at inducing these nations to halt such activities.

The State Department should also be instructed to negotiate with member nations of the IWC to prohibit the sale of surplus whaling equipment.

The setting aside of funds to purchase such equipment at somewhat above normal scrap prices might well expedite such negotiations.

It should be particularly noted that infractions by fleets openly flying the flags of IWC members are extremely common, and are a constant danger to endangered species.

The following paragraph appearing in a paper by Fisheries Research Board of Canada illustrates, as an example, the concern being occasioned by the use of combined factory-catcher vessels by Norway, usually considered the most restrained of the whaling nations.:

"Pelagic whaling in the North Atlantic, such as that announced by Tonnessen (1970, p. 290) on the part of Norwegian small factory-catcher vessels could pose a threat to this (Bowhead) and other species unless adequate inspection safeguards are provided for offshore whaling."

It should be emphasized in considering the matter that whaling outside the IWC is in no really essential way different than whaling by IWC members; that IWC members have been largely responsible for reducing the numbers of several species to such a desperate level that they can easily be wiped out by pirates; and that Russia and Japan are now well along toward bringing the Finback whale to "commercial extinction", with the Sei, Minke and Sperm also becoming increasingly scarce.

○